The Mining Journal
RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 610.—Vol. XVII. LONDON, SATURDAY, MAY 1, 1847. [Price 6d.

COMPANY OF THE COLLIERIES AND HIGH FURNACES OF GARD, AND MINES OF LALLE BASSIN DE LA CEZE.

Social capital 9,000,000 frs. (£320,000), divided into 16,000 shares, of 500 frs. (£20) each.

The first instalment to be paid on subscribing—one-eighth, or £2 10s. per share; a second eighth (£2 10s.) after the definitive constitution of the company; the other instalments will be paid up by eighths every two months.—In case the company cannot be constituted, the eighth paid in will be returned integrally to the shareholders.

The company is provisionally formed *en commandite*, and will be transformed into a *Société Anonyme* as early as possible.

COMMITTEE OF MANAGEMENT, OR SURVEILLANCE.

MM. CORDIER, engineer, founder, and late director of the Administration of Forges of Sirenil.
Lieut.-General Baron GALBOIS, grand officer of the Legion of Honour.
Viscount D'ARAAC, proprietor.
General Count FRIANT, aide-de-camp to the King, commander of the Legion of Honour.
Baron PINOTEAU, proprietor, member of the Legion of Honour. 1
L'ESCUYER, formerly director of Metallurgic Establishments.

The funds arising from the subscriptions will be paid in to Messrs. Delahante, Boyket, and Co., bankers, 7, Rue Chauchat, Paris; offices of the company at Paris, Cité Vindé, Boulevard de la Madeleine.—Eight thousand shares have already been subscribed for.

TO CAPITALISTS CONNECTED WITH THE IRON TRADE AND RAILWAYS.—TO BE DISPOSED OF, and may be entered on immediately, in good working order, with workmen properly appointed, all those new and substantially-erected works, called the 2

FORGES DE LA RISLE IN PONT-AUDEMER,

Capable of manufacturing 200 tons of iron per week. The present proprietors having other important engagements, is the sole cause of their being parted with. The most satisfactory information will be given to parties who may be really desirous of purchasing; and to those who may wish to realise good interest for their capital, with little or no risk, the present offers every inducement and advantage. The whole establishment has been erected within the last two years, regardless of expense; and it is undoubtedly equal, if not superior, to any thing of the kind in France, or any other country—not omitting England, which stands unrivalled in the world.

The works embrace three excellent water-wheels, of the aggregate power of 180 horses—these give motion and power to machinery for working a sheet and plate mill; a forge, with 20 puddling-furnaces; ball, scrap, and reheating furnaces; a steam hammer, or drawing-out forge; a mill for rolling axles, tyres, rails, and every kind of iron for railway purposes; and a bar, or merchant, mill for iron of almost every description.

The whole is covered over with most excellent and large slated roofs, supported by cast-iron columns and brick arches. Vessels of nearly 100 tons burthen come up to and discharge their cargoes of iron and coal into the depôts for that purpose, which are most conveniently arranged for the advantage of the works.

The offices, houses for managers, and workmen, and also for principals, are all that could be desired; in fact, the whole establishment should be seen to be duly appreciated. The proprietors will treat liberally with any person, or company, who may be willing to purchase the whole as it is now in operation; or they will dispose of the plant and machinery (which can be made applicable, at little cost, for rolling zinc, copper, and other metals) without the stock.

Further particulars may be obtained by applying to Mr. Johnson, at the works; or of Mr. Favrin, No. 144, Avenue des Champs Elysées, Paris; of Mr. Charles Davies, No. 8, Adam-street, Adelphi, London; Mr. Charles H. Capper, Birmingham.

SPLENDID PROPERTY.—TO BE SOLD, the beautiful DOMAIN of the CHANET, situated at half an hour's distance from the town of NEUFCHATEL (Switzerland), consisting of 20 hectares of close ground, about one-half in meadow, arable land, large gardens, orchards, and vineyards, and the other half in forest land. Two excellent RESIDENCES, with sufficiently spacious apartments for two families, and a detached HOUSE for the farmer. A large FARMHOUSE, having barns, stables, green-houses, and a bee-hive. This estate, by its situation, being a little above the Lake of Neufchatel, which it commands, and, at the same time, on the borders of the forests, offers one of the most delightful retreats, and the view which is enjoyed from the terrace, is most extensive, presenting, in the foreground, the town of Neufchatel, and the landscapes which present themselves on the banks of the lake; in the distance is the magnificent panorama of the chain of the Alps of Sentis (Appenzell) to Mont-Blanc, which is justly appreciated as one of the finest views of Switzerland. The disposers of the property refer parties for its description to the esteemed "Traveller's Guide in Switzerland," by Ebel. They will enter into an agreement for the sale of the domain between this and the 1st of June, with the purchaser who may offer them satisfactory terms. 3

Address, at Neufchatel, to M. le Professeur Prince; or to M. Calame, Conseiller d'Etat.

GENERAL COMPANY FOR PURCHASING AND CLEARING THE WASTE LANDS OF FRANCE.

Under the auspices of the Minister of Commerce and Agriculture, and honoured by the concurrence of the Peers of France, Deputies, and the leading Agriculturists.

SOCIETE EN COMMANDITE,

Created under the joint-company of L. G. MAGNANT & CO., according to the agreement entered into before M. Fould, notary at Paris, the 19th December, 1846.

Social, or joint, capital 20,000,000 fr. (£800,000), divided into 200,000 shares, of 100 frs. each (£4); one-half of the capital (10,000,000 frs.) is only called for, as it is stated in the Tenth Article of the Act of the Company. 4

The shares will be payable (2l.) by fifths, from month to month, and will bear interest at 5 per cent. per annum, payable half-yearly. The capital is secured by the lands purchased for the profit of the company. The sums arising from the sale of shares will be deposited at the Bank of France, within three days after being paid in, and cannot be withdrawn, but for paying off the purchases, and the necessary expenses for the improvement of the acquired lands, and that only under the signature of the chairman and two members of the council of management. The company has entered into a negotiation for the concession of the Marais (fen) of Cotentin, the property of Louis Philippe. The company will be constituted by the subscription of 40,000 shares, that is 2,000,000 frs.

COMMITTEE OF INSPECTION, OR MANAGEMENT.

BUGEAUD (Marshall), Duc D'ysly, Count Guy de la Tour Dupin.
ELBEE (Marquis of), late Colonel-Chevalier of St. Louis and Malta, Officer of the Legion of Honour.
LEFEVRE (Elysée), Editor of the Agricultural Bulletin of *La Presse*.
REGNAULT DE LA SOUDIERE, late Receiver-General of Finances.
NOGUES (Viscount of), Chevalier of the Legion of Honour, Agricultural Proprietor.
ROSTAING (Marquis of), Chevalier of the Legion of Honour.
Count de la TOUR D'AUVERGNE.
TREMAULT (Baron of), Chevalier of St. Louis, Proprietor.

COMMITTEE OF AGRICULTURE.

LEFEVRE (Elysée), Editor of the Agricultural Bulletin of *La Presse*.
EDOUARD DUBAC, Agriculturist.
VERDIER, Agricultural Proprietor.
NOGUES (Viscount of), Chevalier of the Legion of Honour, Agricultural Proprietor.
DE PLEVILLE, Agriculturist.
REYBE MORANDE, author of the New Theory of Vegetation.

COMMITTEE OF ART AND WORKS.

DE MOLEON, formerly Pupil of the Polytechnic School, Civil Engineer, Chevalier of the Legion of Honour, &c. &c.
PARETO, Civil Engineer.

JUDICIARY COUNCIL.

BERRYER, Advocate, Member of the Chamber of Deputies.
BOYER-COLLARD, Dean of the Faculty of Law of Paris.
FOULD, Notary.
DELACOURTIE, Advocate at the Royal Court.
MOUILLEFARINE, Advocate of the First Instance.
DUEMONT, attached to the Tribunal of Commerce of Paris, Chevalier of the Legion of Honour.
FIEVEE, Chevalier of the Legion of Honour, Government Engineer, charged with the composition of the *material* of the company.

BROKER OF THE COMPANY.—M. BOILEAU.

France required more than in one point the creation of a company such as that which has just been formed, under the direction of a man who has studied during 15 years all the great questions relating to this vast national undertaking. The moment has arrived to reassure the country on the fears which the continued high price of grain too much justifies. It is to this work—as great as it is requisite, as certain as it is profitable—that we invite the attention of all men of intelligence and capacity. Here every thing has been studied and seriously matured; the price of shares even, is a proof of what we set forth. Therefore, we were desirous that a company, founded above all in the interest of the masses, should doubly profit in masses; it was then that we agreed that our shares should be 100 frs. (4l.), only half of which sum is called for by fifths, from month to month—so that the labouring man, who every week takes the produce of his savings to the savings bank, might find in our company an interest more in connection with his wants, above all, in consequence of his small capital. We will say nothing of the security which our company offers; the names of the honourable men who form the committee of management, speak high and loud, and the undertaking itself will cause the social stock to quintuple in a short time. Lastly, the guarantees which we offer to all, repose on the purchased soil becoming the property of the shareholders. Very important concessions of lands are already offered to the company. The statutes of the company are distributed free, on a written application to the administration. The shares are subscribed for at the offices of the company, 51, Rue de la Madeleine; for the provinces and abroad, the applications must be sent free of postage, with a written engagement, and the first fifth, by a post-office order, or an order at sight on Paris.

PATENT GALVANISED IRON AND WIRE ROPE WORKS, 5

MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £30, under the ordinary process. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.—Mr. I. T. Tregellas, Truro, agent for Cornwall.

CORNWALL.—HIGHLY-IMPORTANT SHARES IN THE GREAT ST. GEORGE AND WHEAL PERRAN MINES.

MR. TIPPET has received instructions to Offer for Sale, by PUBLIC COMPETITION, on Wednesday, the 5th day of May next, at Three o'clock in the afternoon, at Pearce's Royal Hotel, Truro, in fourteen lots, 17-1280ths undivided Shares of and in all those most important and valuable COPPER MINES, called GREAT ST. GEORGE and WHEAL PERRAN, situate in the Parish of Perranzabuloe, in the County of Cornwall. 6

Full and descriptive particulars whereof will be ready for delivery in a few days; in the meantime, the Mines may be inspected, and every information given by Capt. Pill, on applying to him thereon; and all further particulars obtained at the office of Mr. TIPPET, Pydar-street, Truro.—Truro, April 23, 1847.

LARGE PUMPING-ENGINE.—TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, Helston, Cornwall, one 80-inch pumping-engine, 10 feet stroke in the cylinder, and 8 feet in the shaft, with three tubular boilers of about 25 tons, a balance-bob and top-piece of red to each. This excellent engine was erected by one of the first engineers in the county; the air-pumps are lined with brass, and the whole of the machinery possesses great strength and durability. It has done a "duty" equal to the first in Cornwall, and is well worth the attention of any gentleman or company requiring such a powerful machine. The engine will be sold with or without the boilers, balance-bobs, &c., as may best suit the purchasers.

Application to be made to Capt. R. Williams, on the mines.
Dated Godolphin Mines, Helston, Cornwall, February 25, 1846. 7

IRON CRANES.—FOR SALE, SEVERAL REVOLVING IRON CRANES, capable of lifting three tons each; they are of the most modern construction—manufactured, under contract, by one of the most eminent crane makers in Scotland, and will be sold below prime cost.—May be inspected at W. and J. Hales's, Custom-house, and Wool-quay, Lower Thames-street.—Price and specification may be had of Mr. Alex. Reid, 70, Lower Thames-street. 8

GEORGIA TIN MINES, divided into 2048 shares, and worked *ON THE COST-BOOK SYSTEM.*

The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen. 9

NORTH-EASTERN MINING COMPANY OF IRELAND.

CONDUCTED ON THE COST-BOOK SYSTEM.

Divided into 512 shares, with an immediate call of £10 per share. 10

The prospectus of the company, with reports on the past operations and present returns, may be obtained on application at the office of Mr. Henry English, mining engineer, 25, Fleet-street, London, to whom all communications, with reference to the increased issue of shares, are to be addressed, and where specimens of the ore, and other information, may be acquired.

EAST COOMBE MINING COMPANY.—Notice is hereby given, that the ADJOURNED GENERAL MEETING of the adventurers will be HELD at the Fortescue Arms Hotel, Barnstaple, on Wednesday, the 5th of May inst., at Three o'clock precisely, to receive a report from the committee, and on other business.

W. H. FINCH,
A. H. PENGELLY. 11

Dated Swymbridge, April 26, 1847.

LLANCYNFELIN MINING COMPANY.—The shareholders in the above undertaking are PARTICULARLY requested to attend the ANNUAL GENERAL MEETING, convened for Friday, the 7th inst., at Two o'clock, to be HELD at the offices, 44, Finsbury-square, as points of importance, touching the pecuniary affairs of the company, and its past operations and present prospects, will be brought under the notice of the shareholders.—May 1, 1847. 12

DEAN PRIOR AND BUCKFASTLEIGH MINES.—A SPECIAL GENERAL MEETING of adventurers will be HELD on Thursday, the 13th of May inst., at Two o'clock precisely, at the offices of Mr. Henry English, 25, Fleet-street, London, to receive a report on the mines, with the accounts, and on other business.—May 1, 1847. HENRY ENGLISH. 13

ILAM MINE.—A SPECIAL GENERAL MEETING of adventurers will be HELD on Thursday, the 13th of May inst., at Three o'clock precisely, at the offices of Mr. Henry English, 25, Fleet-street, London, to receive a report on the mines, and on other business.—May 1, 1847. HENRY ENGLISH. 14

WHEAL EMMA.—A SPECIAL GENERAL MEETING of adventurers will be HELD at the offices of Mr. Henry English, No. 25, Fleet-street, London, on Thursday, the 13th inst., at Four o'clock precisely, to receive a report on the mines, and audit the accounts, and further to determine on other matters then to be submitted.—May 1, 1847. HENRY ENGLISH. 15

TRELEIGH CONSOLIDATED MINING COMPANY.—Notice is hereby given, that a DIVIDEND of SIX SHILLINGS per share, being 5 per cent. upon the paid-up capital, has been declared by the directors, and that the same will be PAID at the office, on Monday the 3d of May next, and on every subsequent Monday, between the hours of Eleven and Three. The certificates will be required to be left two clear days, for the purpose of being marked. 16

57, Old Broad-street, April, 1847. WILLIAM NICHOLSON, Secretary.

WHEAL ANDERTON MINING COMPANY.—Notice is hereby given, that the QUARTERLY MEETING will be HELD at the Royal Hotel, Plymouth, on Monday next, the 3d of May, at Two o'clock in the afternoon, for the purpose of investigating into the general affairs of the mine, as also to receive the report of its present appearances, and other business connected with the future working of the mine. JAMES CARPENTER, Agent and Purser. 17

Wheal Anderton Mine, April 19, 1847.

WHEAL CURTIS COPPER MINING COMPANY.—Notice is hereby given, that a GENERAL MEETING of the shareholders of this company will be HELD at the offices, as below, on Tuesday, the 4th day of May next, at One o'clock in the afternoon, when the Deed of Settlement will be submitted for signature, and a statement of the accounts and prospects of the mine laid before the meeting. By order, GEO. A. JACOB, Secretary. 18

Gresham Rooms, Basinghall-street, London, April 23, 1847.

WHEAL CONCORD MINING COMPANY.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the adventurers in this mine will be HELD at the secretary's, office, No. 4, King-street, Cheapside, London, on Tuesday, the 11th May next, at Two o'clock precisely, for the purpose of CREATING 1024 NEW SHARES, at THIRTY SHILLINGS per share (the present adventurers being entitled to the option of taking the said shares, in the proportion of one new share for every old share); for the appointment of a finance committee, and auditors; and on other business.—Callington, Cornwall, April 28, 1847. G. W. SNELL, Purser. 19

WHEAL CONCORD MINING COMPANY.—At a Meeting of adventurers in Wheal Concord Mine, held at the offices of the secretary, No. 4, King-street, Cheapside, on Tuesday, the 27th of April, pursuant to circular,

PETER DAVEY, Esq., in the chair.

The minutes of the proceedings of the committee since the preceding meeting were read.

It was moved and seconded,—It appearing to the adventurers assembled, that it would be desirable to extend the number of shares, of which the company is constituted; that a Special General Meeting be held on Tuesday, the 11th day of May next, at Two o'clock precisely, to consider and determine on the issue of 1024 shares, at the rate of 30s. per share; and that notices of such meeting be transmitted by the purser accordingly; it being understood that the new shares so created shall be offered to the adventurers, *pro rata*, or disposed of in such manner as they may determine.—Carried unanimously.

It was moved and seconded,—That the accounts submitted to the meeting be passed, subject to the same being audited, by two adventurers to be appointed.—Carried unanimously. 20

It was moved and seconded,—That Messrs. W. J. Harris and Henry English be requested to act as auditors of such accounts, and report the result at the next meeting.—Carried unanimously.

It was moved and seconded,—That, under existing circumstances, and until the arrangements contemplated in the preceding resolution be carried out effectually, the committee be empowered to limit the operations at the mine as they may deem most expedient.—Carried unanimously.

It was moved and seconded,—In order that the adventurers may have a solid basis to guide them in taking up the new shares, and at the same time that the fullest information should be acquired and furnished as to the position of the mine, Capt. Lean be requested, conjointly with Capt. J. B. Clymo, the resident agent, to examine and report on the present state and prospects of the mine, and that the same be submitted at the next meeting of adventurers.—Carried unanimously. P. DAVEY, Chairman.

The thanks of the meeting were passed to P. Davey, Esq., for the services rendered by that gentleman in advancing the interests of the company, and for his conduct in the chair on the present occasion.

THE PATENT SAFETY FUSE,

FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 21

ORIGINAL LONDON AND WESTMINSTER IRON STEAM-BOATS.—SIXTY SHARES in the above company TO BE SOLD, at SIX POUNDS per share. The INTEREST has always been 11s. per share per annum. Apply to Mr. P. Harbin, 12 and 13, Clement's Inn, near St. Clement's Church, Strand. 22

SULPHUR.—TO BE SOLD, RODGERS'S PATENT FOR THE SEPARATION OF SULPHUR FROM MINERAL SUBSTANCES. Apply to Mr. PHILLIPS, 2, Duke-street, Adelphi, London. 23

BLAST-ENGINE.—TO BE SOLD, a powerful BLAST-ENGINE, with 84-in. steam cylinder, and 108-in. blowing cylinder.—For price and particulars, apply (by letter), to 104, Post-office, Wolverhampton. 24

WANTED—A BLAST-FURNACE MANAGER.—Previous and sufficient experience in considerable and successfully-conducted iron-works is indispensable: steadiness, sobriety, good character, and close attention to his duties, are equally required. Superior ability and qualifications will be considered worthy of liberal remuneration. No person deficient in these respects would be suited to the situation, the works being already on a considerable scale.—Applications (in writing), stating particulars of qualifications and experience, may be addressed to "A. B.," at Brown and Parnell's, stationers, 17, Old Broad-street, City.—An interview will be appointed with any party with whom it may seem likely that an arrangement may be made. 25

TO MINING ADVENTURERS.—DESIRABLE MINING PROPERTY IN MERIONETHSHIRE, NORTH WALES.—TO BE DISPOSED OF, ENTIRE or LET, for a term of years, all that valuable property, known by the name of MAES-Y-CLADD, containing, by admeasurement, 146 A. 2 R. 14 P., or thereabouts, with the minerals under the same. A lode of the purest copper has just been discovered, which, if worked, would make an immense return. The public may rest assured this is no puffing—as an inspection (which is particularly desired) would induce the most timid to purchase; it is solely owing to pecuniary difficulties that the present owner now offers it for disposal. It may be well to add, that the distance from a shipping quay is only a mile and a half.—For terms, and further information, apply to Mr. C. Lewis, mine agent, Barmouth, who will show the property. 26

TO MINE ADVENTURERS.—A respectable YOUNG MAN, who has had considerable experience in Cornwall for the last nine years, as an ASSAYER OF COPPER, SILVER, LEAD, TIN, IRON, &c., and also a general knowledge of SMELTING and PRACTICAL MINING, OFFERS his SERVICES to any GENTLEMAN, or COMPANY, concerned in the above branches. He has been abroad, and is acquainted with the Spanish language, and has no objection to go again—especially to South Australia.—Letters (post-paid), addressed to Mr. James Lane, 75, Old Broad-street; or at the office of the *Mining Journal*, 26, Fleet-street, London, will receive every attention. 27

April 10, 1847.

TO RAILWAY DIRECTORS, ENGINEERS, &c.—IRON RAILS, CHAIRS, GIRDERS, COLUMNS, PIPES; also, BEST BAR, ROD, SHEET, PLATE, AND HOOP-IRON, direct from the Works. 28

Apply to T. M. GLADSTONE and CO., No. 7, Birchin-lane, City.

METAL AGENCY.—WANTED, by a firm in LIVERPOOL, an AGENCY for the SALE of COPPER, IRON, TIN, TIN-PLATES, and METALS generally. One partner, who is acquainted with the trade and manufacture, would devote a large portion of his time and attention to the business. An agency in any one of the branches, if the business was likely to be extensive, would not be objected to.—Letters to be addressed to Box G 69, Post-office, Liverpool. 29

PIG-IRON.—JAMES BANKS AND CO. have always FOR SALE SCOTCH PIG-IRON, deliverable, free on board, at the Broomielaw, Port-Dundas, Ardrossan, and in the Frith of Forth, at Charleston. 30

Glasgow, 21, Renfield-street.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 31

MESSRS. J. PAINTER AND CO, SHAREBROKERS, MINING AND GENERAL AGENTS, 25, *CASTLE-STREET, LIVERPOOL,* AFFORD EVERY INFORMATION as to the STATE of the MARKETS, PRICES, upon application. 32

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES. *THREE KING'S COURT, LOMBARD-STREET, LONDON.* 33

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES. 18, *THREADNEEDLE-STREET, LONDON.* 34

MINING OFFICES, 1, *ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.*

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 35

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET,* has SHARES FOR SALE in the following MINES—viz.: 36

WHEAL LOUISA,	ALBERT CONSOLS,
WHEAL BLENCOWE,	WEST SHEPHERD,
WHEAL MARY PENTUAN,	VICTORIA TIN MINING COMPANY.

*** Every information will be afforded on application.

MESSRS. LINTHORNE, JONES, AND CO., STOCK, MINING, AND SHARE AGENTS, 37

*** Every information will be afforded as to the markets and prices of the above, on application (post paid) at their offices,

48, *THREADNEEDLE-STREET, LONDON.*

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER, 38

MATTHEW-STREET, TAVISTOCK.

Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

JAMES LANE, MINING SHARE DEALER, 39

75, *OLD BROAD-STREET, LONDON.*

MESSRS. WINSTANLY AND CO., SHAREBROKERS, inform their friends and the public, they BUY and SELL every description of RAILWAY SHARES on the most advantageous terms; they also make advances upon the deposit of scrip and shares for periods as may be agreed. 40

6, Bank Chambers, City.

JOHN TREGONING, MINE SHARES COMMISSION AGENT—HIGH CROSS, TRURO,

Has SHARES to DISPOSE of in the following MINES:—

Wheal Comfort	Great Consols
Wheal Tremayne	Perran Wheal Virgin
West Wheal Providence	Gwinear Consols
Wheal Clifford	Burthy Mine
Wheal Maria (Tin)	Great Callestick Moors
Callestock Mine	Garras Mine
Wheal Williams	Budnick Consols
Lamberooe Wheal Maria	Lostwithiel Consols

PURCHASER in Stray Park and West Wheal Alfred. 41

MINING ADVENTURERS' SUBSCRIPTION ROOM, 28, *THREADNEEDLE-STREET, LONDON.*

CROSSMAN, SOMMERS, AND CO., AGENTS,

SHARES FOR DISPOSAL. 42

Birch Tor Tin Mine	Wheal Tremayne Copper Mine
Wheal Yeoland Copper Mine	Great Wheal Frederick Linkinghorne
Grose's Delabole and Wharncliffe Slate Quarry	Wheal Collier
West Wheal Providence Copper Mine	North Eastern Mining Company of Ireland—a few shares
Grambler and St. Aubyn Copper Mine	&c. &c. &c.

SOUTH FRIENDSHIP WHEAL ANN,
A FEW FORFEITED SHARES in the ABOVE MINE FOR DISPOSAL.

WANTED TO PURCHASE—SHARES in Wheal Sisters, in Wheal Gonamena, and in West Treasury.

CROSSMAN, SOMMERS, & CO. beg gratefully to acknowledge the receipt of many letters from mining adventurers, commendatory of their system, and promising support; they also beg to acknowledge the receipt of applications from highly-deserving parties in Truro and Tavistock, for the appointment of agents under such system. Crossman, Sommers, and Co., do not wish to make their system exclusive, but will be quite ready to co-operate with these, or any other parties in the mining districts who will publicly announce their intention of conducting their business upon the principle introduced by Crossman, Sommers, and Co., and who will STRICTLY adhere to the system to which Crossman, Sommers, and Co., pledged themselves in their prospectus.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	*Address.*	*Day.*	*Hour.*
Western Scientific Inst.	Leicester-square	Monday	9½ P.M.
Entomological	17, Old Broad-street	Monday	8 P.M.
British Architects	16, Grosvenor-street	Monday	8 P.M.
Chemical	Society of Arts, Adelphi	Monday	8 P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Pathological	21, Regent-st., Waterloo-pl.	Monday	8 P.M.
Linnæan	Soho-square	Tuesday	8 P.M.
Horticultural	21, Regent-street	Tuesday	3 P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Zoological	11, Hanover-square	Wednesday	3 P.M.
Royal	Somerset-house	Thursday	4 P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Royal Institution	Albemarle-street	Friday	8 P.M.
Botanical	20, Bedford-st., Covent-gar.	Friday	8 P.M.
Asiatic	14, Grafton-street	Saturday	2 P.M.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3½ P.M.

ROYAL COLLEGE OF CHEMISTRY.

The third *soirée* of the members of the Royal College of Chemistry, was held in the society's rooms, Hanover-square, on Wednesday evening last,—the Marquis of NORTHAMPTON in the chair,—when a very interesting lecture was given by Mr. Apsley Pellatt, on the manufacture of glass, illustrated by various descriptive diagrams of the processes and manipulations used in the glass-house, as well as by numerous and most beautiful specimens of ancient and modern glass ware, from a magnificent engraved vase, of the estimated value of 300*l.*, to the ordinary table glass. The composition of the various kinds of glass, the necessary purity of its materials, the decomposition of its substance from excess, or defect in the proportions of the alkali, were explained; and the grinding, cutting, polishing, &c., illustrated by reference to specimens in the various stages of manufacture, and by models of tools and apparatus. This most interesting lecture, which was delivered and explained in a lucid and popular manner, was concluded by a description of the present method of intaglio engraving, contrasted with the high relief of the Portland and Naples vases, which last beautiful gem was discovered at Pompeii, in 1837. At the conclusion of the lecture, the Marquis of Northampton exhibited some specimens of ancient coloured glass, and gave some interesting details of this manufacture by the Egyptians and Etruscans, showing that the zig-zag pattern was peculiar to these nations, and never found in Greek or Roman designs. The rooms were filled by a distinguished audience, who appeared to be much interested with the very beautiful specimens, consisting of filligree, mille fiori, schmelz, vetro ditrina, and mosaic glasses.

INSTITUTION OF CIVIL ENGINEERS.

APRIL 27.—Sir J. RENNIE (President) in the chair.

The paper of the evening was "On the Laws of Isochronism of the Balance-spring, as connected with the higher order of adjustments of Watches and Chronometers." By Mr. C. Frodsham, Assoc. Inst. C.E. The first portion gave an historical sketch of the horological inventions and writings of the artists of the 18th century, which appear to constitute the basis of all the knowledge possessed in the present day, and the principles of whose school were still invariably followed in the construction of both watches and chronometers of the better sort. It was admitted, that by the aid of machinery and the practical skill of the workmen, that separate pieces of clocks and watches were now produced in a high state of perfection; but it was contended that horology, as a science, had declined since the days of Hooke, Bernouilli, Sally, Graham, Harrison, Camus, Mudge Elicot, the two Arnolds, Earnshaw, Le Roy, Berthoud, and others, whose splendid talents, and scientific attainments, were all devoted to the elevation of the art of constructing time-keepers. Among these, Dr. Hooke appears to have been the first to bring the force of acute reasoning and pure mechanical genius to bear upon the practice of the art, and his experiments upon the pendulum and the application of the balance-spring, which latter unquestionably laid the foundation of the chronometric art. It is evident that he partially raised the veil which concealed the laws of the isochronism of the spiral spring, as is demonstrated by his expression "*ut tensio, sic vis*"—and it is extraordinary that so plain a hint was not immediately seized upon by the able men who succeeded him. Arnold appears to have been the first who really practically comprehended the subject; and in the course of his researches he invented the cylindrical spring and compensation balance, which formed the commencement of a new era in the science. The merit of the discovery of the isochronism in France was contested by Le Roy and Berthoud. Bernouilli noticed, in a paper read to the Academy in 1747, the fact of the loss of elastic force in balance-springs from exposure to heat; and the experiments of Berthoud demonstrated that in passing from 32° to 99° Fah., the loss *per diem* was 6 minutes 33 seconds. The paper then considered generally and technically the subject of the isochronism of the balance-spring, enunciating isochronism to be an inherent property of the balance-spring, depending entirely upon the ratio of the spring's tension, following the proportion of the arcs of inflection; a balance-spring, therefore, having the progression required by the laws of isochronism, will preserve that property, whether it be applied to a balance making quick or slow vibrations. The elastic force of balance-springs was considered as a constant, because the action is by a number of consecutive impulses following each other in such rapid succession as to constitute an uninterrupted and continuous force. This is shown in considering the accelerated and retarded motion of the balance, when by following it through an entire arc of vibration it will be seen, that if the balance be moved over a given number of degrees, the spring will be wound into a certain tension, and has acquired a certain elastic force due to the angle over which it is inflected. This elastic force being thus transferred to the balance, it will be exerted in overcoming its inertia, and at the expiration of the first period will have communicated a slight motion to it. During the next period, its state will be that of comparative, and not absolute inertia (for it decreases as the motion increases), whence it follows that as the spring's force is exerted against a body in motion instead of at rest, it will necessarily accelerate progressively the motion the balance had previously acquired, until the spring arrives at the point of quiescence, where, having lost all its elasticity, it ceases further to urge the balance, and a new relation of power and resistance takes place. The spring's force being transferred to the balance, it assumes a new character, has acquired sufficient momentum to carry it through the second half of the vibration, and to inflect the spring over an angle equal to that first passed over, and to give it the requisite tension to commence a new vibration; particularly as during the second half of the vibration the spring has so little tension that its force retards but slightly the motion of the balance. After much acute reasoning upon this position, illustrated by numerical examples, the author proceeded to describe the helical and the flat coiled springs which are used in chronometers and watches, and the manner of regulating their action so as to take advantage of the isochronism, instancing the advantages to be derived from the innate power possessed by an isochronal spring of resisting the influences which cause a change of rate, such as change of position, increased friction from dirt, or the viscidity of the oil at low temperatures. This was well illustrated by an example of three balls falling in equal times through spaces regulated by the densities of the medium—viz., in vacuo, in air, and in water; wherein they traverse spaces equal to the squares of the times. So it was argued, it was with increased friction in watch-work; for the elastic forces of the balance-spring being constantly proportional to the angle of inflection, whatever was the amount of friction, the law of isochronism remained unchanged, and friction was only an adventitious circumstance, which affects the extent of the arc of vibration, but not the time of its description. The discussion upon this interesting paper was deferred until the next meeting, on Tuesday, May 4, when the paper read will be "An account of the progressive Improvements in Sunderland Harbour and the River Wear," by J. Murray, Mem. Inst. C.E.; after which the monthly ballot for members will take place.

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Published by the author; and may be had from Kent and Richards, 51 and 52, Paternoster-row; Hannay and Co., 63, Oxford-street; Starie, 23, Tichborne-street, Quadrant; Gordon, 148, Leadenhall-street, London; Newton, 16, Church-street, Liverpool; and by all booksellers.——At home for consultation daily, from nine till two, and from five till eight; and all letters, immediately replied to, if containing the fee of £1, for advice, &c. The work may be had direct from the author's residence, and will be forwarded, free by post, to any address for 3s. 6d. in postage stamps.—9, Bedford street, Bedford-square.

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THE SILENT FRIEND: a medical work, on the concealed cause of constitutional or acquired debility, loss of muscular energy, and derangement of the generative system, nervous debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strange, 21, Paternoster-row; Hannay & Co., 63, Oxford-street; Noble, 109, Chancery-lane, Gordon 146, Leadenhall-street; Purkiss, Compton-street, Soho, London.

Part I. of this work is addressed to those who are prevented from forming a matrimonial alliance, and will be found an available introduction to the means of perfect and secret restoration to manhood.—Part II. treats upon those forms of diseases, either in their primary or secondary state, arising from infection—showing how numbers neglect to obtain competent medical aid, entail upon themselves years of misery and suffering.

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Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Gas-Light and Coke Company—Crown and Anchor Tavern, at Eleven.
Mines Royal Company—offices, at Twelve.
Wheal Anderton Mining Company—Royal Hotel, Plymouth, at Three.
TUESDAY.....Wheal Helen St. Aubin Mining Company—at Praze.
Anglo-Mexican Mint Company—offices, at One.
Metropolitan Sewerage Manure Company—offices, at Two.
London Commercial Exchange—offices, at One.
West Middlesex Water-Works Company—office, at Eleven.
Wheal Curtis Mining Company—offices, at One.
Herne Bay Pier Company—King's Head Tavern, at Two.
Cubert Silver-Lead Mining Company—offices, at One.
Southwark Bridge Company—offices, Twelve for One.
WEDNESDAY..Ulster Canal Company—offices, at Eleven.
East Coombe Mining Company—Fortescue Arms Hotel, Barnstaple, Three.
THURSDAY....Westminster Life Assurance Society—office, at Twelve.
Vauxhall Bridge Company—offices, at One.
Mexican Company—offices, at Two.
West Wheal Maria Copper Mining Company—at the mine, at One.
Lamheroee Mining Company—offices, at Two.
Wheal Benny Mining Company—office, at One.
FRIDAY.....Assam Company—offices, Twelve for One.
Llancynfelin Mining Company—office, at Two.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

CALEDONIAN RAILWAY COMPANY.

An extraordinary general meeting of shareholders was held at Gibb's Royal Hotel, Princes-street, Edinburgh, on Monday last.—W. LOCKHART, Esq., M.P. for Lanarkshire (one of the directors), in the chair. One of the solicitors for the company acted as secretary to the meeting.—The CHAIRMAN then called upon the secretary to read the report, of which the following is an abstract:—

REPORT.

This meeting has been called in compliance with the Standing Orders of the House of Lords, for the purpose of submitting to the shareholders certain bills now before Parliament, in order to obtain their formal sanction thereof, and likewise for the other purposes specified in the advertisement—viz., of considering and sanctioning a proposed agreement for a lease of the Dundee and Perth Railway; also, an agreement for a lease of the Wilsontown, Morningside, and Coltness Railway; and of authorising the borrowing of a further sum of money, under the Caledonian and Clydesdale Junction Amalgamation Act. These measures will, if approved by the shareholders, and sanctioned by Parliament, tend greatly to improve the relations and augment the value of the Caledonian Railway. The directors are happy to be able to state, that four of the bills—viz., those relating to the Lesmahagow and Motherwell Branches, and to the improvement of the Garnkirk line, and Buchanan-street station, in Glasgow, are entirely unopposed. The remaining bills have been introduced for the purpose of obtaining the authority of Parliament to the amalgamation arrangements entered into with the Wishaw and Coltness, Greenock and Glasgow, and Barrhead and Neilston Railway Companies, all of which have been already sanctioned by special meetings of the shareholders; and to enable this company to avail themselves of the provisions introduced into the Glasgow, Dumfries, and Carlisle Railway Acts of last session, relative to the lease of the portion of that railway between Gretna and Annan. The directors, subject to your approval, have agreed to enter into a lease of the Dundee and Perth Railway and its branches, at a guaranteed rent of 36,000*l.*, upon a capital of 450,000*l.*, payable half-yearly. Of this rent, the proportion corresponding to that part of the capital which has been paid up, will be payable from the date of opening of the line from Dundee to Barnhill. The remaining proportion, corresponding with the balance of the capital, will be payable from the dates of the payment of the calls to be hereafter made from time to time. In this way, the whole of the line will be completed and opened before the rent will become exigible in full. The directors further agreed to adopt the engagement already entered into by the Dundee and Perth Company with the Dundee and Arbroath Company. The capital of the latter company is 266,666*l.* 13s. 4d., the whole of which is not yet paid up. The Dundee and Perth Company are under an obligation to pay a fixed rent of 21,333*l.*, being at the rate of 8 per cent. on the capital. The full rent, however, will only become payable when the whole of the above capital shall have been paid-up. A further accessory to this agreement with the Dundee and Perth Company will be the adoption of the purchase of the Dundee and Newtyle Railway, which has been acquired by the Dundee and Perth Railway Company, under the authority of an Act obtained during the last session of Parliament. The terms upon which this line was acquired were—the payment of a yearly rent of 1400*l.* per annum, the purchase of the branch to the harbour of Dundee, at a cost of 5750*l.*; and the undertaking of the debt upon the line, which amounts to about 15,000*l.* The arrangement proposed with regard to this railway is, that it shall be leased to the Caledonian Company at its actual cost, they bearing the annual burdens affecting the same, and paying the interest of the debt and capital required to complete the improvements and provide the plant for the same. And the surplus profits exceeding 8 per cent. to be divided equally betwixt this company and the Dundee and Newtyle Company, but no guarantee to be given. The surplus profits, until they reach that rate, are to be paid to the Dundee and Perth Company; and the Caledonian Company are to have power to acquire the line at any period within seven years, at a free yearly rent of 8 per cent. on 50,000*l.*, and an equal division of profits. The remaining matter for the consideration of the meeting is, the proposed agreement for a lease or purchase of the Wilsontown, Morningside, and Coltness Railway. Since the advertisement was published calling the present meeting, difficulties have arisen in the way of carrying out the arrangement, and in the present position of matters, the directors are not prepared to recommend the meeting to come to any resolution on the subject. The favourable state of the weather during the winter has enabled the contractors to press forward the works with a degree of rapidity which could hardly have been anticipated.

The SECRETARY having read the report, intimated the receipt of a number of proxies from shareholders in the London and North-Western Railway in favour of the chairman of the present meeting.—The CHAIRMAN then rose and stated that, in consequence of the absence of the chairman of the company, Mr. H. Johnstone, who was engaged in Parliament promoting their interests as involved in various measures now in progress, it had devolved upon him (Mr. Lockhart) to occupy his place. He would congratulate them that the affairs of the company were so prosperous. The hon. gentleman concluded by moving that the report be approved of.—The CHAIRMAN having put the approval of the report, it was seconded by Mr. ANDERSON, merchant, Glasgow, and carried unanimously.—The CHAIRMAN thereupon moved a resolution to the effect, that this meeting sanctions and approves of the agreement for a lease and guarantee of the Dundee and Perth Railway.—Mr. ANDERSON, of Glasgow, having been a party to the arrangement, had great pleasure in seconding the motion.—Agreed to.

The SECRETARY then intimated that with regard to the second purpose of the meeting, in reference to the Wilsontown, Coltness, and Morningside Railway, no vote would be taken at present. With regard to the third, authorising the raising of money on mortgage under the Act, amalgamating the Caledonian, Govan, and Polloc and Clydesdale Junction Railways, he explained that the Act contained a clause providing, when half the capital shall be paid up, making it lawful for them to borrow 150,000*l.* in addition to the capital of 700,000*l.*, authorised by the previous Act. Upwards of half the capital having now been paid-up, they wished to apply for the power to borrow.—The CHAIRMAN accordingly moved a resolution to this effect, in conformity with section 12 of the Amalgamation Act, which was agreed to.—The SECRETARY then read *seriatim* the *formula* of resolutions, sanctioning and approving of the various bills. Agreed to unanimously.—A SHAREHOLDER said, that at the ordinary general meeting it had been resolved to give interest on calls; he wished to know how or when the interest would be paid?—The CHAIRMAN said, the interest commenced Oct. 1, 1846, but, in order to adapt it to their usual terms, it would not be paid till June 30, when the usual warrants would be payable July 31.—Mr. ANDERSON moved the thanks of the meeting to Mr. Lockhart, for his conduct in the chair.

GREAT WESTERN AND NORTH WESTERN RAILWAYS—MOZLEY *v.* ALSTON.—The Vice-Chancellor having over-ruled the two demurrers, and granted the injunction in this case, prayed for by the London and North-Western Company, to prevent the Oxford and Birmingham Railway Company from being united to the Birmingham, Wolverhampton, and Dudley line, and from their being sold to the Great Western Company, an appeal was made to the Lord Chancellor, who gave judgment on Wednesday last. After remarking at great length on the nature of the case, and summing up the various points in the arguments, his Lordship said, he should refrain from expressing any opinion on the merits, when the preliminary objections prevented the exercise of any jurisdiction; he should, therefore, allow the demurrers, and over-rule the decision of the Court below. By this decision the injunction is annulled, and the parties are in the same position as before the bill was filed; the present position of the parties is decidedly in favour of the Great Western Company, and the London and North-Western Company are now left the choice of an action at Common Law, or an appeal to the House of Lords.

SOCIETY FOR TEACHING THE BLIND TO READ.—The anniversary dinner of this most useful and humane society was held on Tuesday last, at the London Tavern. Mr. John Abel Smith presided on the occasion, supported by Lord Dudley Stuart, Sir Felix Booth, Messrs. John Masterman, jun., G. Hoare, Mildred, P. N. Johnson, John Field, George Thomas, H. E. Gurney, James Hartley, J. E. Heathcote, Robert Mushet, Charles Parker, E. H. Plumptre, Peter Stainsby, Dr. Spurgin, Dr. Thompson, and surrounded by a highly respectable party of gentlemen interested in the success of the institution. We have before noticed the objects and wants of the charity, so that it is unnecessary now to repeat them; we may state, however, that the great aim of those who conduct it, is the extension of its usefulness by the erection of a suitable building. During the evening subscriptions were announced to the amount of 600*l.* The arrangements of the festival were perfectly satisfactory.

An attempt is to be made to renew a valuable patent, now nearly expired, for a process which greatly facilitates the separation of silver from lead. The attempt is entirely unwarrantable, for the patentee has been amply rewarded for his invention already, and it is mischievous to the mining interest of the country, since its object is to prolong a monopoly of a few great houses who have bought the patent right. Raising as Cornwall does such large quantities of silver-lead, it is a subject of great local interest; and, therefore, we now call attention to it, and shall bring all the facts before our readers.—*Cornwall Gaz.*

A CURE OF A LIVER COMPLAINT OF LONG STANDING BY HOLLOWAY'S PILLS.—James Holmes, of Temple-st., Bristol, had the liver complaint more than three years: he was in the Bath Hospital several months, but came out in a weaker state than when he went in. Afterwards, at Swansea, he received the best attention of the medical men at two institutions, but derived no benefit. Being unable to procure sufficient work to keep him, he returned to his friends at Bristol, and commenced the use of Holloway's pills, which, in three months, restored him to perfect health. He is now working constantly at his trade as a mason.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

THE TRACTIVE POWER OF THE LOCOMOTIVE ENGINE UPON HEAVY GRADIENTS.

A series of experiments were made on Saturday last, by Mr. Gooch (the locomotive superintendent of the Great Western Railway) on the Stroud incline of the Gloucester line, the results of which are of an exceedingly gratifying character, with respect to the progress of locomotive traction. Less than 20 years ago the capability of the locomotive engine was considered to be circumscribed within 6 or 10 miles per hour with a load of 10 or 12 tons; and within the last 9 or 10 years it was questioned by many of our first railway engineers, whether even light passenger trains could be worked with moderate speed and economy up inclines of a greater severity than 1 in 330. And, at the present moment, there appears to be a desire on the part of some engineers to induce committees of the House of Commons to believe that the gradients of 1 in 100, 1 in 110, or 1 in 115, are a sad drawback to moderate speeds, at the very moment when a very fair average passenger speed can be attained upon gradients of a much more severe character. While some honourable Members of the Lower House seem to be hesitating, we repeat, whether a line with gradients of 1 in 110—not in one direction, but in both directions—can be travelled over with light loads at a moderate passenger speed, Mr. Gooch is running heavy passenger trains up a series of gradients of 1 in 105, 1 in 75, 1 in 70, 1 in 75, 1 in 70, and 1 in 60, at velocities which we believe will not be credited by some engineers, even when we give the working from actual observation—speeds, too, that have been attained *under the greatest possible disadvantages.*

The portion of the Gloucester line on which the experiments—the details of which we are about to give—were made, is that lying between the 96¼ and the 99¼ mile-posts—viz., over 2¾ miles. The line, for the whole of this distance, is a series of S curves, varying from 2000 to 3600 ft. radius; and the starting point, from which the experiments commence—viz., the 98¼ mile-post—is on a rising gradient of 1 in 105. This gradient extends for a little more than a furlong, and is succeeded by a rising gradient of 1 in 75 for about half a mile. There is then a rising gradient of 1 in 70 for nearly a quarter of a mile, followed by a rising gradient of 1 in 75 for rather more than three-quarters of a mile. We then come to a level of about a quarter of a mile. There is then a rising gradient of 1 in 70 for nearly a quarter of a mile, and next a rising gradient of 1 in 60 for nearly three-quarters of a mile. It was over these severe gradients (all of them on curves) that the power of the locomotive was tested; and in order that the power might be really and commercially tested, the train was brought to a dead stand upon the incline of 1 in 105.

As the run was over 2¾ miles only, it was necessary to take the time with great nicety, and at short intervals, for the purpose of ascertaining the increase or decrease of speed upon the several gradients. To do this, it was requisite to note the exact time at which each quarter mile-post was passed, and to mark the time by quarter seconds. Some persons who lay claim to great practical knowledge in the management of railways, assume that it is impossible to take correctly, by a watch, high velocities for so short a distance as a quarter of a mile. To meet the objection of these persons, we shall state the mode in which the time was taken by us, premising that our notes of the working produce precisely the same results as those given by Mr. Gooch's indicator, a new and exquisitely contrived machine, just constructed by that gentleman for the purpose of marking the speed at which a train travels, the atmospheric resistance presented to it, and the tractive power exerted by the engine. Our time was taken by what is called a split seconds-hands watch (a beautiful little instrument by C. Frodsham, of the Strand), with four beats to the second, and noting time by quarter-seconds. These split seconds are two hands, one immediately under the other, moving from the centre of the dial. By pressing a spring at the handle of the watch, the lower of these two hands is stopped instantaneously, while the upper hand moves on and keeps its proper time. When the pressure is removed from the spring, the lower hand as instantaneously overtakes the upper hand, which is keeping its proper time, and proceeds onwards immediately under it as before. This is, in fact, the only way in which the exact speed of trains proceeding at high velocities can be ascertained by a time piece. At the rate of 60 miles per hour, the mistake of a second per mile causes an error of a mile per hour; in a quarter of a mile, it would make a mistake of four miles per hour; and the most practised eye, in glancing from the mile-post to the seconds hand, would 9 times out of 10 make a blunder to the extent of one or two seconds. It is to such a mode of taking rates of speed that we must refer the ridiculous statements that are continually appearing respecting alleged extraordinary speeds attained by passenger trains on the narrow gauge lines.

The first experiment was with 50 tons, exclusive of the engine and tender. It was taken by the *Great Western* engine, which has 8 ft. driving-wheels, 18-in. cylinder, and 2 ft. stroke. The train left the 98¼ mile-post at 12 h. 47 m. 15½ s., and reached the 95¾ post at 12 h. 53 m. 14 s., performing the 2¾ miles in 5 m. 58½ s., or at an average speed of about 27 miles per hour. The top of the incline of 1 in 60 is rather more than a furlong within the tunnel, but the sudden change from light to darkness shut it completely from our sight, so that we are unable to give, from our own observation, to which we confine ourselves, the working over the last quarter of a mile.

The second experiment was with 60 tons, with the same engine. The train started at 1 h. 26 m. 12½ s., and passed the 95¾ mile post at 1 h. 32 m. 54½ s.—doing the distance, therefore, in 6 m. 43½ s., or at the average rate of about 24¼ miles per hour.

The third experiment was with 111 tons, drawn by two locomotives—the *Dreadnought*, goods engine, with 5 ft. wheels, 16 in. cylinder, and 2 ft. stroke, and by the *Great Western*. The train started at 3 h. 55 m. 47½ s., and passed the 95¾ post at 4 h. 2 m. 16½ s. The distance was, therefore, performed in 6 m. 29 s., or at the average rate of 25 miles per hour.

The fourth experiment was with the same load of 111 tons, with the *Dreadnought* alone. The train left the starting-place at 4 h. 34 m. 57½ s., and passed the 95¾ post at 4 h. 42 m. 42½ s., doing the distance in 7 m. 45 s., or at the average rate of about 23 miles per hour.

The fifth and last experiment was with 70 tons, with the *Great Western*. The train started at 4 h. 26 m. 7½ s., and passed the 95¾ post at 4 h. 33 m. 51½ s., being, therefore, 7 m. 44½ s. on the journey, and performing the distance at an average speed of about 23 miles per hour—doing, therefore, not more than the coupled goods engine had just performed with 111 tons. But it is necessary to state, that the moment before the *Great Western* started with the 70 tons, a slight sprinkling shower came down and wetted the rails; and it will be seen, from the details given below, that had the run been 5½ miles instead of 2¾ miles, the working of the 8 ft. driving-wheel passenger engine with the 70 tons would have shown a very much higher average velocity than that of the coupled goods engine with the 111 tons.

It has, indeed, been stated by railway engineers, that a locomotive with 8 ft. driving-wheels cannot start well, even on a level. Some six or eight months since, we gave, in disproof of this statement, the working of the *Great Western*, with a stopping train of 100 tons, between Paddington and Reading; and, in corroboration of the accuracy of the results then furnished us, and of the groundlessness of such statement, we shall now proceed to show how soon such an engine gets into speed when starting on an incline of 1 in 105, and running over still heavier gradients. To illustrate this point, we shall give the average speed attained by the locomotive over the last quarter of the first mile travelled by it after starting from the incline of 105. It is requisite to restate the gradients of this first mile of running. For a little more than a furlong the gradient is a rising one of 1 in 105. There is then a rising gradient of 1 in 75 for about half a mile; then a rising gradient of 1 in 70 for nearly a quarter of a mile, and the remainder of the mile is on a rising gradient of 1 in 75.

Average speed maintained over the last quarter of the first mile:—

Great Western Engine.	*Time of Running.*	*Speed per hour.*
With 50 tons	30½ sec.	29½ miles.
60 ,,	33½ ,,	26½ ,,
70 ,,	42½ ,,	21 ,,

We shall now give the average rates of speed (at miles per hour) at which the several loads were taken—placing the gradients in the order that they occur from the starting point—viz., the 98¼ mile post:—

*Average Speed over the Gradients.**	*Gt. Western 50 tons.*	*Gt. West. 60 tons.*	*Two eng. 111 tons.*	*Dread-nought,† 70 tons.*	*Gt. Western 70 tons.*
1 in 105 for about a furlong	11	10	11½	11	9
1 in 75 for about ½ a mile	24½	23	22	19½	19
1 in 70 for nearly ¼ a mile	29½	26½	23½	20½	21
1 in 75 for about ½ a mile	33½	31	29½	23	26
Level for about ¼ a mile	38½	34½	33	27½	31
1 in 70, nearly ¼ a mile	39½	35½	36½	29½	33½
1 in 60, ¾ a mile	36	33	35	26	31

* As they occur from the starting point. † 111 tons.

The advantage of what is called "running" at a heavy gradient—that is, approaching it from a descent or a level—will be easily understood by the reader, if he attends to the great increase of speed attained over the level of only a quarter of a mile, and the further increased rate over the heavy gradient immediately beyond it. We believe that these workings are very far beyond anything that has yet been performed by the locomotive-engine. We shall shortly return to this subject, and show how utterly the details given above annihilate the popular—we might say the fashionable—theory of resistances to railway trains at high velocities.—*Morning Herald.*

EXTRAORDINARY SPEED ON THE LONDON AND NORTH-WESTERN RAILWAY.—A special train, consisting of five carriages, was taken from London to Birmingham, 112 miles, on Wednesday morning, in 2 hours and 30 minutes. The actual time of travelling did not exceed two hours, being an average speed of 56 miles per hour, the train being stopped four times on the journey to allow other trains to be clear of the line, besides the stoppage at Wolverton to change engines. The engine which started from London, No. 157, is one of Mr. Stephenson's ordinary patent engines; and the latter part of its journey, 21 miles, was performed in 21 minutes. The maximum speed over upwards of a mile, was 75 miles per hour. The engine from Wolverton to Birmingham was also a patent engine of Mr. Stephenson's, having three cylinders; and it performed the first part of the journey, 41 miles (until it was stopped by another train), in 42 minutes. Maximum speed in this portion of the journey, 64 miles per hour. We understand that Lord George Bentinck, and several gentlemen going to the Chester races, were in the train. A side wind was blowing throughout the journey. Mr. M'Connell (the locomotive superintendent of the London and North-Western Railway Company), and Mr. Winter (the superintendent of Mr. Stephenson's patent engines), were on the engine, and describe the motion at the highest velocities as being perfectly steady.

BLACKBURN, DARWEN, AND BOLTON RAILWAY.—The workmen are already actively engaged in preparations for the erection of the Blackburn station of this railway. The station is to be on a large scale, the length of the building being 252 ft., and its mean breadth about 40 ft. The platform will be 380 ft. long, and the four lines of rails in front of it will be covered by an iron roof in one span; the inside of the station will be lit by a plate-glass Louvre light, of 16 ft. wide at the top of the roof, extending along its whole length. The station buildings will be in the Italian palazzo style, and afford the most ample accommodation; the second and third class passengers' waiting-room being 35 ft. by 25 ft. 6 in.; besides separate ladies' waiting-rooms for these classes. The entrance to the station is under a lofty covered portico, 48 ft. long and 30 ft. wide, with a carriage-way under it. The approaches are to be numerous, and will prove highly advantageous to the public, opening up communications not only to the station, but between different quarters of the town now kept distant by very circuitous roads. The Darwen station, of which the plans are also prepared, will be a handsome gothic structure, furnishing ample accommodation.

LAUNCH OF AN IRON STEAM SCHOONER.—On Saturday last, an iron steam schooner, on the screw principle, and of excellent model, was launched by W. Pim, Esq., of the St. George Iron-Works, Hull. She is of the same dimensions, and equal in every respect to the *Liverpool* and the *Dublin*, now plying between the ports whose name they bear, and is constructed for the same company and the same service.

The Miners' Manual, and Shareholders' Guide.

BY J. Y. WATSON, ESQ., F.G.S.

DEVONSHIRE GREAT CONSOLIDATED COPPER MINES.—These mines are situated near Tavistock, Devon, and consist of Wheal Maria, Wheal Fanny, Wheal Josiah, Wheal Anna Maria, Wheal Frementor, and Wheal Jack Thomas—the first four being on the same lode, the latter two on parallel lodes. The company is registered under the Joint Stock Act, in 1024 shares, 1*l.* per share paid up; market value 400*l.* per share; held in few hands, and few transactions take place in them. Managed by a board of directors in London:—viz., R. S. Gard, Esq., chairman; W. Morris, Esq.; J. Thomas, Esq.; W. A. Thomas, Esq.; T. Morris, Esq.; Mr. A. Allen, secretary.—Offices: Barge-yard, Bucklersbury.—Manager at the mines: J. H. Hitchens, Esq., of Tavistock: Capt. Richards, head agent.—The mines, 1485 fms. in extent on course of lodes, are held on lease for 21 years, from 25th March, 1844, of his Grace the Duke of Bedford, at 1-15th dues, until the mines paid 20,000*l.* profit, after which they were to be, and consequently now are, 1-12th. Operations were commenced in 1844, and ore first sold in January, 1845. The ore returned from this time to December, 1845, was 11,258 tons, yielding, with carriage, 105,384*l.* 2s., out of this 55,296*l.* were divided among the shareholders as profit the first year. From January to December, 1846, the returns were 15,618 tons, yielding, with carriage, 101,805*l.* 8s. 11d.—out of this 37,888*l.* were divided as profit. Total returns to end of 1846, 207,189*l.* 10s. 11d.—total dividends paid to end of 1846, 93,184*l.* The first sale of ore this year was on the 21st January, 1200 tons, yielding 7322*l.* 16s.; the second was on the 18th February, 1391 tons, yielding 8983*l.* 14s. 6d. The first dividend this year was declared on Thursday, Feb. 25, and amounted to 5120*l.*; a second dividend, of the same amount, was paid on the 22d inst.—the present returns are made at a working cost of 4500*l.* per month. The principal operations have been, and still are, at Wheal Maria (where the deepest level is 50 fms.), although Wheal Josiah, and Wheal Fanny are now coming into full operation; at Wheal Maria there are three shafts, Gard's, Morris's, and Castle's; at Fanny, two shafts, engine and western; at Anna Maria, one shaft sinking, and an adit driving; at Josiah, two shafts. The machinery, which is very extensive and efficient, consists of two steam-engines, water-wheel, grinders, &c. ——

EAST WHEAL ROSE LEAD MINE is in the parish of Newlyn, Cornwall—divided into 128 shares, 50*l.* paid; market value of shares, 1200*l.* to 1500*l.*—mine conducted on the Cost-book System, finances managed by a committee of Cornish adventurers—Purser, E. Michell, Esq., Truro; manager at the mines, Capt. J. Middleton. Mine held in three setts, East Rose, Cargoll, and Oxnams; lease 21 years (more than half expired), at 1-15th dues; the lords being C. H. T. Hawkins, Esq., and the Bishop of Exeter. The entire mine is about two miles long, on the course of the lodes (north and south)—four of them are being worked, and they run along the bottom of a valley—the steam-engines, of which there are six, with the 16 principal shafts, being placed on the slope of the hill—deepest shaft, 100 fms.—machinery estimated to be worth 40,000*l.* The mine has been at work about 10 years, and paid a profit to the shareholders of 160,000*l.* The present returns are 250 to 300 tons of lead per fortnight, yielding 7000*l.* at a working cost of 2500*l.* Profits divided every two months—in 1845 they amounted, for the year, to 52,864*l.*; in 1846, 37,888*l.* The first dividend this year was paid on the 16th inst., and amounted to 3840*l.*; the second, amounting to 5120*l.*, was paid on the 23d inst.—Upon the mine, underground, and at surface, about 1100 persons, including men, women, and children, are employed.

WHEAL TRELAWNEY SILVER-LEAD MINE is in the parish of Menheniot, near Liskeard, Cornwall. Conducted on the Cost-book System, in 260 shares—7*l.* 10s. per share, paid up; present market value, 120*l.*—Purser and manager: Capt. P. Clymo, jun., of Liskeard; underground agents, Capts. H. Vivian, and J. Kemp.—The sett in extent, is 400 fms. on the course of the lode, and held on lease for 21 years (18 years unexpired), at 1-15th dues; the lords being C. Trelawney, I. Carthew, and J. Toby, Esqrs., and Dr. Honey. The returns of lead ore from the commencement to the end of February last, have been 1017 tons, yielding 14,606*l.* 11s. 4d.—out of this sum 3,120*l.* have been divided as profit among the adventurers. The machinery consists of a 22-inch cylinder engine, and a 42-inch just erected, at a cost of nearly 2000*l.* It has been in consequence of this expense, and the purchase of an addition to the sett, for which 1200*l.* were given, that the dividends have of late been suspended. The returns at present are 70 tons per month, which, upon the working cost, will leave a large profit. It is expected dividends will be resumed in July next. The deepest level is the 42 fm., at the old engine-shaft; rich levels are driving at the 22, 32, and 42 fms. both north and south, and there is a large body of ore in reserve. A report of all the operations at the mine is forwarded for the satisfaction of the London shareholders, to the offices of Messrs. Watson and Cuell, St. Michael's-alley, Cornhill, every fortnight, and regularly published in the *Mining Journal*.

WHEAL MARY ANN.—A silver-lead mine adjoining Wheal Trelawney to the south. Conducted on the Cost-book System, in 512 shares, 3*l.* 15s. paid; market value, 30*l.*—Purser and manager, Peter Clymo, jun., Liskeard.—The sett, which in extent is much larger than Trelawney, is held on lease for 21 years, of which 19 are unexpired, at 1-12th dues. The surface owner being Miss Pollard, who, in addition to the dues, is to receive 1000*l.* in money out of the first profits. At the commencement of the works, a shaft was sunk close to the boundary of Trelawney, where the lode was cut at a depth of 5 fms., and from this place 82 tons of lead have been returned, yielding 1686*l.* 7s. 4d.; another shaft was sunk on a hill further south—a steam-engine has been erected to work the mine effectually.

WHEAL TREHANE LEAD MINE, adjoining Trelawney; in fact it takes an angle out of their sett, and has their lode for 65 fms. in length, when it again enters Trelawney to the north. Conducted on the Cost-book System, in 256 shares, 2*l.* paid; market price, 20*l.*—Manager and purser, Mr. John Philp, Liskead; agent on the mine, Capt. Bryant.—The sett is held on lease for 21 years, from the 25th March, 1846, at 1-15th dues—lord, Mr. Thomas Kelly.—Operations were commenced in the latter part of March last year, by sinking a few costean pits along the back of the lode. A shaft was then sunk on the lode, and which has now reached a depth of 39 fms., without the aid of machinery, the lode in the bottom being worth 8*l.* per fm. In the 30 fm. level, the lode has been driven north 26 fms., worth 12*l.* per fm., and south near to the boundary of Trelawney. If the underlay of the lode continues as it is now—viz.: 1 ft. in a fathom, the agent calculates the length of it in Trehane at the 130 fm. level will be 32 fms. The first parcel of ore (36 tons), raised from the mine, was sold on the 7th of December (eight months only from the commencement of the working), and realised 24*l.* 13s. per ton. To the present time the ore sold has amounted to 84 tons, yielding 1766*l.* The first dividend of 1*l.* per share was declared on the 1st March. There is again a good parcel of ore ready for sale, and much more could be sold were it not for want of water to dress it. The working cost is not more than 150*l.* per month. Since this was written, another field, belonging to the St. Germans Poor, has been added to the sett; this gives about 30 fms. additional run on the lode.

SOUTH WHEAL TRELAWNEY.—A large sett, nearly two miles from Trelawney, near to Menheniot Church Town. Conducted on the Cost-book System, in 256 shares, 15*l.* paid; market value, 10*l.*—Temporary purser, Capt. W. Lean; agent, Capt. Jenkin; London secretary, Mr. T. Hacket, Birchin-lane.—The mine is held on lease for 21 years (about 19 unexpired), at 1-15th dues, of Mr. Rabey. An enormous premium was paid for the sett, and a great deal of money has been uselessly expended upon it. At present a shaft is being sunk to prove the lode (and an engine erecting), and upon which the main success of the mine depends. With good management the concern may turn out well.

EAST TAMAR CONSOLIDATED SILVER-LEAD MINES is in the parish of Beer Ferris, in the county of Devon—the sett consisting of Whitsun, Lockeridge, and Furzehill; is in extent 858 fms. (or not quite a mile), on the course of the lode; and held under lease from the Earl of Mount Edgecumbe, for 21 years, from the 25th December, 1844, at 1-15th dues. Conducted on the Cost-book System, under a committee in London, consisting of F. Ignatius Van Zeller, Esq.; C. Bailey, Esq.; G. W. Harrison, Esq.—Offices: Old Broad-street.—Manager at the mines, J. H. Hitchins, Esq.; head agent, Capt. B. Robins.—Divided into 9000 shares, with a paid-up capital of 15,750*l.*; present market value, 27,000*l.*, or 3*l.* per share. The mines have been worked at various periods since the days of Queen Anne, and returned large quantities of silver-lead ores; but, until the present company commenced operations, nothing effectual was done. These commenced in April, 1845, and six different shafts have been cleared up to from 30 to 40 fms. under adit, which is 30 fms deep, and shafts and levels cleared up, sunk and driven, in all considerably upwards of 2000 fms. At Whitsun, the shaft is 60 fms. under adit, sunk from the 46 fm. level by the present company, and there are five ends driving in productive ground; there is here a 40-inch cylinder, and a pumping engine erected by the present company. Lockeridge is 156 fms. north of this, and where there is a shaft 50 fms. deep, and the driving of the 54 from Whitsun will in a short time unwater it. At Furzehill, this shaft is 214 fms. south of Whitsun, and 46 fms. deep, sunk from 30 fms. by the present company. Here are four ends driving in productive ground, and the shaft sinking below the 46; there is a 58-inch cylinder pumping engine here, also a 36-inch cylinder stamping and drawing engine, with 24 heads of stamps and crusher. The first sale of ore took place in December, 1845, from which time to the 19th inst., 514 tons have been sold, realising 8470*l.*, showing an average of 16*l.* 10s. per ton. The matrix of the lode is fluor-spar, which realises 10s. per ton. The driving of the bottom levels south will bring a large range of ground into operation, and under the present bottom of the mines or shafts known in former workings as Charlotte's and Caroline's. The present monthly raisings are about 50 tons, which pays the cost. The prospects appear favourable.

[*To be continued in next week's Mining Journal.*]

Mining Correspondence.

ENGLISH MINES.

ALBERT ADVENTURE.—I am glad to state a considerable improvement in the lead course has occurred since Tuesday last, and we are now bringing to grass all the stuff as the men break it out of the lode. During the fortnight preceding Monday last, the lode was but thinly interspersed with lead—to-day I have taken some very capital stones indeed. I am anxious to see the junction of a small vein on the north of the said lode, which will join it at about a fathom farther east; do not, however, be too sanguine, as alterations are frequent. Even at the present shallow level, should the lode become a regular lead course, for a fathom or two, it is likely shares might be worth something. The south cross-cut is very hard, but the probability of being near a lode increases. As we were satisfied with the costeaning pits in Trenowin, we discontinued working there. I have put two men to costean east, on the run of the north lode, on the spot a little to north and east of the railway (about 100 fms. from where the men are raising the lead stuff), and they have discovered the back of the lode there.—April 17.——The lead lode still improves, and the stuff we took down from the north lode has splendid lead and copper in it.—W. WITCOMB: April 28.

BARRISTOWN.—The lode in the 18 fm. level end, west of flat-rod shaft, is worth 18*l.* per fm.; in the rise also behind this end the lode is worth 18*l.* per fm. In the 12 fm. level end west the lode is worth from 18*l.* to 20*l.* per fm., considerably improved; the stopes in bottom of this level to the 18 fm. level south cross-cut, are worth from 12*l.* to 16*l.* per fm; this lode, in winze sinking under the 18 fm. level, is still poor, but working more regular than for some time past; the back of the 12 fm. level looks pretty well, worth about 14*l.* per fm. We have this day cut a gossan lode at Clon Mines at surface, about 3 ft. wide, which I will report more fully on next week, when we sink a few fms. on it. No further change since my last.—T. ANGOVE; G. WHITE: April 22.

BEDFORD UNITED.—At Wheal Marquis, the canal having been turned out for cleansing and repairs, has prevented our cutting through the lode in the 80 fm. level east as anticipated; we have cut into the caples about 3 ft., and hope to be able to advise you in our next of our having cut through the lode; the sump winze is 1 fm. 1 ft. below this level (the 80); the lode is 3 ft. wide, and worth 20*l.* per fm. There has been no lode taken down in the 70 fm. level east. The lode in the 58 fm. level east is 18 in. wide, composed of spar and mundic, with spots of ore in places. At Liscombe, the lode in the adit level east is 18 in. wide, producing good stones of ore; the lode in the rise in this level is without alteration. The south engine-shaft is 1 fm. 2 ft. under the plat; the lode is 3 ft. wide, producing fine stones of ore. The lode in the adit level is 18 in. wide—spar, mundic, and ore.—JAMES PHILLIPS: April 27

CARADON WHEAL HOOPER.—We have not made that progress in the shaft during the last two months that I anticipated at the last meeting, nor as we have in former months—the usual sinking for two months amounted to 6 fms., the last two only 4 fms.—consequently, we shall not reach the 50 fm. level by the time I anticipated by four weeks. This detriment is easily accounted for, in consequence of meeting with a hard floor of ironstone, 3½ fms. thick: but although this hard ground has considerably impeded our progress for the time, I have no doubt it will end in lasting and good results to the shareholders—for myself, I am much pleased to see it. I have seen instances of this in many places, but never saw one fail to make copper. This is demonstrated at the Fowey Consols Mine, where I have seen floors of this sort of stone, which have cost the adventurers from 80*l.* to 100*l.* per fm. for sinking; yet I have heard the agents say, they would as soon see ironstone in the cross-cuts as a small course of ore. Fortunately for us, we have not had to give 70*l.* nor 100*l.* per fm., for just as we came in contact with the ironstone, a lode came in the shaft, which, though small and insignificant when it first approached to the shaft, spread and divided the rock, and is now 20 in. wide. This greatly facilitated our sinking, as it is of a soft nature, and the men were able to cut it before for a "halk," as we miners term it. The composition of the lode is sugary spar, with good peach, rich looking mundic, fine quartz, beautiful prian, and some good quality copper, specimens of which I have forwarded for your inspection to-day. This lode is worthy of an outlay to any amount to develope its resources. I do most heartily congratulate you on the prospects we have before us in this mine; they never have been so cheering as at present. I wish you to understand, that not one doubt ever crossed my mind concerning Wheal Hooper; and I am happy to find, that all the agents that have inspected the mine are of the same opinion. Again, I wish to call your attention to the delightful and geological situation of the mine. A correspondent of the *Mining Journal* writes, "Should this piece of ground be so fortunate as to partake of the metalliferous character of the granite above, she will rapidly repay the shareholders;" and I think she does altogether partake of the metallic substance—if not, how can be accounted for all these branches that are passing through the sett, with copper interspersed throughout them, and the copper taken from the lodes, and that which is now disseminated in the floors of ground we are now penetrating. I wish to remind you, that the mine is at that point of speculation which demands all calls to be paid in immediately. The shaft is sunk 48 fms. 2 ft. below surface, and shortly we shall be in a position to commence driving to intersect the lodes in the 50 fm. level. We shall have but 12 fms. to drive to cut three lodes. My advice to you is to enforce the payment of all calls immediately.—JOHN SEYMOUR: April 23.

COOK'S KITCHEN.—Chapple's lode, in the engine-shaft, sinking under the 180 fm. level, which it is about 4 fms. below, is large and kindly, but not producing much tin. In the 180 fm. level east, the part of the lode on which we are driving is 4 ft. wide, and worth about 6*l.* per fm. In the 170 fm. level east, the part of the lode on which we are driving is 4 ft. wide, and worth 8*l.* per fm. In the rise, in the back of the 160 fm. level east, against new east shaft, the part of the lode on which we are rising is 4 ft. wide, and worth 6*l.* per fm. The new east shaft is now about 1 fm. under the 148 fm. level, where the part of the lode on which we are sinking is 4 ft. wide, and worth 6*l.* per fm.; we hope to communicate this shaft with the 160 fm. level in course of about a month. In the winze, sinking under the 148 fm. level west, on the flookan part of the lode, which is about 3½ ft. wide, we find but a small quantity of tin—expect to hole previous to our next setting. In the 92 fm. level west, on Eudy's lode, the lode is much more kindly, and worth about 15*l.* per fm. In the 80 fm. level, driving south from North Tincroft lode, we have not yet met with anything worthy of notice. We have commenced clearing the adit shaft, on the Druid lode, preparatory to clearing the adit west from Tincroft. Our tribute pitches are, on the whole, looking favourable; and the ground at and about the 170 fm. level west is answering quite equal to our expectations.—J. VIVIAN.

COOMB LAWN.—We have now working in the mine four men and a boy, driving west on the two north lodes in the deep adit, and from which they are breaking some saving work.—R. SERJEANT: April 29.

CUBERT SILVER-LEAD.—The sumpmen will be ready to sink, in the course of a few days, below the 35 fm. level—they are now employed in cutting trip-plat under said level, taking up water, &c., &c.; in the cross-cut, at this level, we consider, from appearances, that we have passed through the Trebiskin lode, as well as the great or middle lode—they are about 2 ft. from each other apart; the former is 10 in. wide, producing very good saving work; the latter is 2 ft. wide, composed of spar, mundic, and good stones of lead—altogether, a very promising level. The lode going east, in the 25 fm. level, is 1 ft. wide, good saving work; the same may be said of the end, in this level, going west. In the 15 fm. level, driving east, the lode is 18 in. wide, yielding some pretty good work—a kindly end. To-day, we have held the public setting for May, and have set 10 pitches, varying from 2*l.* 15s. to 6*l.* per ton, employing 26 men on tribute.—R. ROWE.

DEAN PRIOR AND BUCKFASTLEIGH.—We have cross-cut in the bottom level, east of engine-shaft, 4 ft. 10 in.; the lode is composed of capel and mundic. The 30 fm. level west we have suspended for the present, in order to sink a winze for ventilation, which will be greatly in favour of the future proceedings. In the 40 fm. level no alteration; price for driving 4*l.* 10s. per fm. In the rise, in the back of the 50 fm. level, the lode is much improved since my last report; we have discovered the shoot of yellow ore that is gone down in the level above; the orey part of the lode is about 15 in. wide, with a leader 6 in. big, nearly solid ore; price for rising, 8*l.* per fm.—H. CHOAKE: April 28.

DEVON AND COURTENAY CONSOLS.—The 30 fm. cross-cut, at engine-shaft, is in 4 fms. 2 ft. On Thursday last, we cut a small branch about 5 in. wide, underlaying south, which contains some good stones of ore; the ground under the branch is a beautiful killas, and I expect from the appearance of the ground, that we shall cut the lode by the latter end of next week. There is very little alteration in the appearance of the lode in deep adit, on south lode, since my last. The ground in shallow adit, on north lode, is favourable for driving; lode has just the same appearance as last reported. There is very little alteration in the appearance of the lode, in flat-rod shaft, on north lode, since my last report.—JOHN JOB: April 27.

EAST CROWNDALE.—The lode in the shaft at Rix Hill has not been quite so good in the past week, a floor of killas having disordered it, though we have broken some good work; it is again resuming its usual appearance, and I hope to break some good work next week, as the lode is again getting into peach, which is the kind of stone the tin is chiefly found in. The ground in the adit level, towards the Rix Hill lodes is stiff, and not so speedy for breaking, the end now being in a firm close killas. Our engine-shaft is now down 35 fms. 1 ft. 6 in.; the ground is a dark blue killas, of a close texture, and very congenial for copper.—S. PAULL: April 24.

EAST TAMAR CONSOLS.—At Whitsun, Hitchins's shaft is sunk 4 fms. under the 60 fm. level—ground hard for sinking. We have put the men to open the ground between the shaft and lode, which will make it more convenient for sinking on the course of the lode; and, as the lode in the bottom of the 60 is very free for breaking, we shall be able to sink and prove the lode a great many pounds per fm. less than any sinking in the country; the lode in the 60 fm. level north is 14 in. wide, composed of capel, spar, and lead; the lode in the 60 fm. level south is 10 in. wide—good saving work. The lode in the 54 fm. level south is 2 ft. wide, composed of capel, mundic, and lead; the lode in the 54 fm. level north is still in slidy ground. The lode in the 46 fm. level south of Gourd's shaft is 2 ft. wide, composed of fluor-spar and lead ores—saving work. At Furzehill, our castings being ready, we shall recommence sinking to-morrow; the lode in the 46 fm. level north is 18 in wide, work of a good quality; the lode in the 46 fm. level south is 2 ft. wide, saving work. The lode in the [illegible] level north is 18 in. wide, saving work.—B. ROBINS: April 27.

GREAT MICHELL CONSOLS.—The engine-shaft is down 11 fms. below the 22 fm. level, the lode in which is composed of spar, mundic, fluor, and good stones of ore.—T. RICHARDS: April 27.

GREAT WHEAL MARTHA.—I stated in my last report that the ground in the cross-cut extending south towards the lode in the 40 fm. level was improved, but at present the killas is more compact; and its dip being towards the lode, it is less favourable for driving than it has been in any of our former cross-cuts—all of which have been driven northerly, instead of southerly, as at present; every effort, however, is being made to accomplish our object, and the operations are going on satisfactorily. We have now driven the cross-cut 4½ fms., cut the plat, and the shaft cleared, in order to fix the new pitwork; we have part of the lift on the mine, which we shall begin to fix next week. At Sherrall's, we are sinking on the course of the lode, which is from 3 to 4 ft. big, composed principally of tin, capel, and spar, but unproductive.—T. PENALUNA: April 24.

GUNNIS LAKE.—At Chilsworthy, Bailey's engine-shaft is 7 fms. 2 ft. under the 12 fm. level, lode 2½ ft. wide—spar and capel, with good stones of ore. We have cut the great cross-course in the 12 fm. level west, and commenced driving through it; in this level east we are still driving south.—W. RICHARDS: April 27.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, is disordered by slidy ground.—P. RICHARDS: April 27.

HINGSTON DOWN CONSOLS.—The sumpmen are still engaged cutting down north shaft for engine-shaft, under the 20 fm. level. In the 20 fm. level west, the lode continues 2½ ft. wide, good work; in the pitch, in the back of this level, there is no alteration; in the 20 fm. level east, we have just reached whole ground, in which the lode is 2½ ft. wide, producing good work, and very kindly.—W. RICHARDS: April 27.

HOLMBUSH.—There is nothing new to report on this week, as it respects the diagonal shaft, below the 120 fm. level—the shaftmen having been employed the principal part of the week (and still are) in fixing the balance bob in the 90 fm. level, and the underlie rods, to draw the water out of the diagonal shaft, occasionally, when it shall have got full, by means of lets or hindrances, which naturally arise, such as cleansing, packing plungers, changing boxes, &c., &c.; but when the water is forked out, we shall disengage the diagonal from the main rod, and sink by means of water barrels. The lode in the 120 fm. level, west of the great cross-course, is 8 in. wide, composed of spar, mundic, and spots of ore; the lode in the 120 fm. level, east of Hitchins's shaft (on the north part), is 20 in. wide, composed of spar, a great quantity of mundic, with stones of rich copper ore—a promising lode. The lode in the 110 fm. level, east of Hitchins's shaft (on the south part), is 10 in. wide, composed of soft spar, and stones of ore; the lode in the 110 fm. level south is 2½ ft. wide, composed of sugary-spar, prian, and stones of rich silver-lead. The lode in the 100 fm. level south is 4 ft. wide, composed of spar, mundic, and stones of lead, worth 6*l.* per fm.; the lode in the rise, above this level, is 2 ft. wide, composed of spar, prian, and spots of lead disseminated throughout the lode, which is all saved to stamp. The lode in the 90 fm. level south is 20 in. wide, composed of flookan, and spots of lead, ground favourable for driving.—W. LEAN: April 27.

ILAM.—Our setting-day was last Saturday—price for driving the 67 fm., west of Robins's shaft, 5*l.* 10s. per fm.; the lode is large, but not much copper at present—price for driving 67 east, 5*l.* 15s.; the lode is much larger than last reported. In the 42 fm. level, west of Robins's shaft, the lode is in an unsettled state, owing to some cross branches cut in driving—set at 6*l.* 10s. per fm.; I have put two men to rise a few feet on the copper in the back of the 42 fm. level yesterday; and, if the copper does not hold up, intend to sink on the bunch gone down.—JAMES SPRAGUE: April 28.

KIRKCUDBRIGHTSHIRE.—The lode in Stewart's shaft is 3½ ft. wide, greatly improved since my last—it produces about 1 ton of lead per fm.; this shaft is now 10 fms. 1 ft. 6 in. under the 30 fm. level—have, therefore, set these men to drive west at 3*l.* 15s. per fm., and in the meantime we propose fixing this 10 fms. of railroad, in order to bring the waggon to bottom as soon as possible. The lode in the end, west of the 30 fm. level, is wider than our driving—viz., 4 ft.—and produces 2½ tons of lead per fm.—set to six men, at 3*l.* 10s. per fm. By opening back on the caunter north-east from this end, we have discovered a branch of flookan, with a branch of lead, producing 1 ton per fm.—set to six men to drive, at 3*l.* 15s. per fm.; this more fully confirms the opinion of its being a caunter, as entertained in the report of the 18th inst. The first stopes in the back of 30 west, are worth 5*l.* per fm.—set to two men, at 2*l.* 10s. per fm.; second stopes worth 10*l.* per fm.—set to six men, at 2*l.* 10s. per fm. The lode in the end east, in this level, is 2½ ft. wide, composed of spar, mundic, and jack, but unproductive—set to four men, at 3*l.* 15s. per fm; the backs in the roof of this level are producing 1 ton of lead per fm.—set to six men, at 1*l.* 12s. 6d. per fm. The lode in the end east, in the 20 fm. level, is 3 ft. wide, poor—set to four men, at 4*l.* 4s. per fm. In the adit end east the lode has not improved since my last—set to two men, at 55s. per fm. In sinking Keath's shaft, we have not yet discovered the rock; we find the water very quick in the till, and are, therefore, forcing up the shallow level, to let it off. We expect to ship 30 tons of lead, more or less, by the end of this month for the market. —J. BUZZO: April 24.

LEWIS.—The lode in the 60 fm. level end east is 3 ft. wide, worth 3*l.* per fm. for tin; the lode in the 60 west is 18 in. wide, producing some tin, and very promising. The lode in the 50 east is 2½ ft. wide, worth 5*l.* per fm. for tin; the lode in the 50 east, on south branch, is 2 ft. wide, worth 9*l.* per fm. for tin. The lode in the 40 fm. level end east is 2½ ft. wide, worth 4*l.* per fm. for tin. The lode in the 30 east is 2 ft. wide, producing some good work for tin, opening at 10s. per fm., and 9s. tribute. The tribute pitches at the back of the 60, and the back of the 50, are looking very well; all other places are much the same as when last reported. The engineers have put the new cylinder at the steam stamps, and set to work yesterday, and it is working exceedingly well. We hope to stamp much more of our tinstuff, and make greater returns than heretofore.—S. S. NOELL: April 24.

MENDIP HILLS.—The lode in the 38 fm. level, south of Stainsby's shaft, is getting into a more settled strata than when I last wrote you; we have both the walls of the lode, which are very regular in their course, about 5 ft. apart; the lode is composed of flookan, and soft white spar, with large lumps of lead intermixed, assuming a very promising appearance. In the slag department, our operations during the past week have been very favourable; the trench, or open cutting, is completed, in as far as the first bed of slags, deeming sufficient has been done here for the present. I have removed these men, to assist in levelling and preparing the ground for the tram further down the valley, towards the proposed site for smelting, &c.; this, I hope, will also be completed by the end of this week, when we shall be in readiness for laying down the tramroad, when brought on the mine.—F. C. HARPUR: April 26.

PENTUAN WHEAL MARY.—Since writing you last week, a little improvement has taken place in the lode in the adit level—it is now from 2 to 2½ ft. wide, and composed of some gossan, a great deal of quartz, and some spots of mundic; it is still underlaying very fast, and the ground about it is rather harder than it was last week; the men have now 45s. per fm. for driving the adit. We have employed a man, during the last fortnight, in sinking some costean pits; but, hitherto, he has discovered nothing worth noticing.—J. HITCHINS: April 26.

SOUTH DOLCOATH.—The lode in the engine-shaft, sinking below the 30 fm. level, is 4 ft. wide, with some good spots of copper ore on the north part —altogether, very promising indeed. The lode in the 20 east is 4 ft. wide, with occasional stones of ore; the same may be said of the 20 end west; as to size and quality, the indications are good for ores in depth.—April 26.

SOUTH WHEAL TRELAWNEY.—Soby's lode in the adit level south is 2 ft. wide, composed of gossan, barytes, with specks of mundic and lead; the men have driven this last month 10 fms. 1 ft 2 in. through a very promising lode indeed, averaging for that length 2½ ft. wide, and is again set to drive at 4*l.* per fm. (extent for the month), or to get opposite the cross-cut. The ground in the cross-cut, west of the engine-shaft, is still favourable for driving; the men have driven 6 fms. 4 ft., and is set again, to continue driving in that direction for the month (or to intersect the lode), at 5*l.* per fm. Should the ground continue as at present, we anticipate making the communication within six weeks from the present date; after which we shall resume sinking the engine-shaft with nine men, but at present we think it would be bad policy to sink at the same time we are driving the cross-cut, and until the adit level is holed, seeing the principal part of the water we have to contend with is coming from a floor (or fissure) 4 ft. above the bottom of the adit, which can be taken up in that level when it is holed; after this is effected, we can sink at a much cheaper rate, besides the extra expense in removing the pitwork, shaft-jacket, &c., and especially as the communication is likely to be made as soon as the engine-house is built and covered over, and some part of the walls of the boiler-house is up, and the foundation for the stack is dug out. The engine, newly cleaned and in excellent condition, in a short time will be fixed in the house.—W. LEAN: April 24.

TAMAR SILVER-LEAD.—In the 160 fm. level, south of the shaft, the lode is 1 ft. wide, work of a coarse quality; in the same level north the lode is 6 in. wide, composed of capel, spar, and ore. In the 145 fm. level, south of the shaft, the lode is 18 in. wide, unproductive; in the north end in this level we are passing through profitable ground; the lode in the end is 2½ ft. wide, saving work —a promising lode. In the 135 fm. level we are also driving through ground that will work at a moderate tribute; the lode in the present end is 20 in. wide, 6 in. of which is rich work. The 125 fm. level is likewise leaving backs that

will set at a low tribute; the lode in the end is 2 ft. wide, yielding work of a good quality. At North Tamar, in driving north in the 60 fm. level, the lode is 3 ft. wide, composed of ore, capel, and ore, work of a promising description; in the south end in this level the lode is 1 ft. wide, good work. I am happy to say, the ends at both the mines are greatly improved. We hope to sample on Friday, the 30th inst., about 80 or 85 tons of rich silver-lead ores.—J. S[illegible]E.

TIN VALE CONSOLS.—The above mines are situate in the par[illegible] St. Neot, contiguous to the celebrated Drains River, on the well-know[illegible]es of Wimbolford and Harrowbridge, embracing a spacious and exten[illegible]alley, bounded on the west by high hills, of a pleasing and graceful declivity. The bottom, or valley, has been streamed for tin during the lapse of ages, and yet its stores are unexhausted. During the last week, a quantity of tin was sold from these mines, which was raised by streamers, and obtained the high price of 62*l.* 10*s.* per ton. Several promising lodes have been intersected by these streamers, of very beautiful and rich appearance, which they were inadequate to pursue to any considerable extent. An adit has been driven about 70 fms. through a granite stratum, which is perfectly congenial for tin—several rich branches having been cut in this cross-cut, which will come in contact with the lode in driving west, at which point (reasoning from analogy) we expect a fine course of tin. Rowe's lode is about 40 fms. beyond the cross-cut; it was sunk on to the depth of 8 or 9 fms., where it was 4 ft. wide, richly spotted with tin; but an influx of water prevented the parties from sinking deeper. The very promising character of this lode was the principal inducement to commence the adit; and it is highly probable that more lodes may be cut in driving this adit, as it is a new and unbroken piece of ground. A quantity of tin has been raised from the branches referred to in the adit, which is still to be seen in the mine. There are several collateral advantages in connection with this speculation, which ought not to be omitted, and which are of vast importance to the interest of this mine:—1, the superior quality of the tin; 2, the softness of the ground; 3, the abundance of water, sufficient for any kind of machinery. From the whole, I believe it to be a first-rate speculation.—W. H. Whitford: April 27.

TRELEIGH CONSOLS.—In the 110 cross-cut, north-east of Christoe's, we are still driving towards the lode; the branch mentioned last week is small. In the 100, east of ditto, the lode is 2 ft. wide, but scarce any mineral, and disordered. Garden's shaft, below the 90, is very hard in elvans, no alteration for the better; in the 90, west of ditto, the lode is 2 ft. wide, worth 15*l.* per fm. In the 80, west of ditto, the lode is 2½ ft. wide, worth 10*l.* per fm.; in the 80, east of ditto, the lode is 3 ft. wide, worth 40*l.* per fm., with a branch gone off south. In the 70, west of ditto, the lode is 20 in. wide, very promising, with good stones of ore. At Good Fortune, in the 70, west from Symons's, the lode is 4 ft. wide, in general caples, not much mineral. In the 60, west of ditto, the lode is 2 ft wide, worth 7*l.* per fm. The winze below the 70, east of Garden's, is postponed for the present.—W. Symons: April 24.

UNITED HILLS.—In the 90 fm. level, eastern end, the lode is 3 ft. wide, worth 8*l.* per fm.; in the western end the lode is 4 ft. wide, worth 18*l.* per fm. In the 80 fm. level, eastern end, the lode is 2½ ft. wide, worth 20*l.* per fm.; west of cross-cut the lode is 2½ ft. wide, worth 14*l.* per fathom. In the 70 fm. level, eastern end, the lode is 3 feet wide, worth 8*l.* per fathom. In the eastern shaft the lode is 4 feet wide, worth 18*l.* per fathom. The 60 fathom level has been suspended about 10 months, poor. In the shallow adit the lode is 2½ ft. wide, worth 7*l.* per fm. At Wheal Charles, in the 50 fm. level nothing done for the past week; in this end the men are still engaged in Turton's shaft. In the 40 fm. level, eastern end, the lode is 3 ft. wide, worth 8*l.* per fm.; in the winze the lode is 2½ ft. wide, worth 6*l.* per fm.; the lode in the stopes is 2½ ft. wide, worth 16*l.* per fm. At Wheal Sparrow, in the 40 fm. level, eastern end, the lode is 2½ ft. wide, worth 6*l.* per fm. West of Turner's the lode is 18 in. wide, worth 6*l.* per fm. In the 30 fm. level the lode is 7 ft. wide, worth 18*l.* per fm. In the winze, in the 20 fm. level, the lode is 2 ft. wide, worth 5*l.* per fm. In the adit level the lode is 18 in. wide, producing but little ore.—Thos. Trevenen; Robert Williams; April 27.

WEST WHEAL JEWEL.—In the 115 fm. level east, on Wheal Jewel lode, the lode is 2 ft. wide; the further this level is extended east, the more promising the lode is looking for ore. In the 100 fm. level west, on the same lode, the lode is 10 in. wide, producing some ore; in the winze, in the bottom of this level, east of Hodges's cross-course, on the same lode, the lode is 20 in. wide, unproductive. In the 70 fm. level, west of ditto, on the same lode, the lode is 8 in. wide, worth 8*l.* per fm. In the winze, in the bottom of the 85 fm. level, on the same lode, the lode is 18 in. wide, producing stones of ore. In the 60 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 2 ft. wide, worth 4*l.* per fm. In the 12 fm. level, west of Quarry shaft, on the same lode, the lode is 2 ft. wide, worth 10*l.* per fm.; the stopes, east of George's winze, in this level, is worth 20*l.* per fm.; in the adit end, west of Quarry shaft, on the same lode, the lode is 1 ft. wide, worth 12*l.* per fm.; the stopes, in the bottom adit, east of Pryor's winze, on the same lode, the lode is 3 ft. wide, worth 25*l.* per fm.; in the 12 fm. level, west of old sump-shaft, on the same lode, the lode is 18 in. wide, worth 10*l.* per fm.; in the 12 fm. level, east of Rowe's winze, on the same lode, the lode is worth 6*l.* per fm.—R. Johns.

WEST WHEAL MARIA.—The eastern engine-shaft is down about 34½ fms., the lode in this shaft is about 5 ft. wide, producing good stones of ore in places. The western engine-shaft is sunk below the 54 fm. level 3 fms. 2 ft.; the lode in this shaft is about 2 ft. wide, composed chiefly of capel and spar, with occasionally spots of ore; in the 54 fm. level east of this shaft, no lode taken down in the past week; in the cross-cut south, at this level, no important alteration.—T. Rodda: April 27.

WHEAL ADAMS.—Nothing has been done in the 60 and 50 fm. levels since the 17th inst., on which day the shaftmen commenced removing the old and fixing the new pit-work, particularised in our report of the 13th; and, although this work was accomplished with every possible dispatch, to prevent the water rising to the 40 fm level, the lode in which, together with the contiguous strata, is so soft, that all the timber hitherto fixed is not near strong enough to keep it after an immersion. The water did not rise to this level; but a portion of ground has given way between the 50 and 60 fm. levels, which precluded either drawing water or raising the lift—so that we have been compelled to procure a lift of pumps, which are fixed, and set to work this morning—the bottom, and most important pitches, will, of course, remain idle for a fortnight. The lode in the 40 fm. level, driving south on the western part, is large, and improved since last week; this end is about 6 fms. from the ore ground, discovered in the 50, before described. The ground in the cross-cut in the 28 fm. level, driving westerly, to intersect the copper lode, is improved, and now set at 3*l.* 10*s.*, instead of 7*l.* per fm. The cross-cuts at the 18 fm. level are cleared and secured—they have been driven to, and levels extended on, the middle branches, but the western lode has not been seen in either of them; and we have resumed driving that opposite the old engine-shaft at 1*l.* per fm. The 43 tons of ore, sold to B. Somers, Esq., are shipped; and expect to procure a vessel, in the course of a few days, to ship the parcels sold on the 21st inst.—J. Prince: April 27.

WHEAL ANDERTON.—The lode in the 60 fm. level, west of shaft, is 5 ft. wide, the leader very rich for tin, in a decomposed granite, of a soft nature, varying from 16 to 20 in. wide. This we discovered on Saturday last, and find it still continue to hold out well; we drew up 50 kibbles of excellent work last night from the new discovery; therefore, it is very evident that the lode improves in depth. There is not the slightest diminution in the lode in size, or quality, in the other departments specified in my last report, but rather improving. I have received a letter from Mr. Bawden, who purchased the tin at 42*l.* per ton, wherein he states, Messrs. Michell had been to him, to transfer it to them, they having offered a greater price—but their offer, by some means, has not reached me. I shall again send samples to-morrow, for a similar, or larger quantity; we are making all possible dispatch to get more ready, with the eight heads now employed stamping. I shall set various works on Saturday next—such as extending the dressing floors, making roads, building smiths' and carpenters' shops, material-house, &c., which I think indispensably necessary for the protection of property, as well as the better convenience of doing our work, as there can now be no doubt of the mine being of long duration, and, as I confidently anticipate, productive and profitable.—J. Carpenter: April 28.

WHEAL CONCORD.—In driving the 38 east, on the south lode, the two branches have come together, and formed the lode, 2 ft. wide, in which are small portions of carbonate of lead. In the 28 west the lode is 4 ft. wide, very promising. In the 20 west the lode is 3 ft. wide, also promising. These are all the levels at present driving. I have thought well to fix three men to rise above the 20 west, about 8 fms. behind the end, where the lode is 2 ft. wide, producing good work. If I do not hear from you in the course of three or four days, and there is no change in the south lode, going east, in the 38, I propose to remove the men, to drive south towards the southernmost lode, which I am anxious to see in that level.—J. B. Clymo: April 29.

WHEAL EMMA.—In the engine-shaft the strata is more favourable for sinking—the sinkmen have sunk in the past week 3 ft. 6 in. In the end, driving east in the 22 fm. level, the north lode is composed principally of spar and mundic, with some spots of ore. In the adit level, West Backwood, the lode is about 3 ft. wide, composed of flookan, mundic, and spar; I have a very favourable opinion of this lode—price for driving 28*s.* per fm., by 4 men.—H. Croake: April 28.

WHEAL LOUISA.—The lode in the 20 fm. level is still of an improving character, I should say more so than hitherto I have seen it—the lode is composed of prian, quartz, and rich copper ore; it is very satisfactory to see those flattering indications, as we are approaching the great cross-course; and, from the appearances, it gives me confidence in saying, that there is a great probability of improvement in the next level, in which I think returns will be made to remunerate the adventurers for their outlay. We have completed cutting the plat, and also casing and dividing the shaft, and we shall be in readiness to resume sinking, by the time this letter comes to hand, under the 20 fm. level.—Things altogether are looking well;—prosperously onward.—J. Chynoweth: April 27.

WHEAL BLENCOWE.—I am happy to inform you, of the extraordinary improvement in the north end of the 10 fm. level since our last general meeting, which improvement is obvious to all who have seen the excellent stones of rich tin which are now at the account-house; last week we broke two particular stones, I should think 3 cwts., worth from 3*l.* to 4*l.*; the lode in the end is now about 4½ ft. wide, worth 50*l.* per fm.; there is every probability, from the present appearance, that it is a regular run of tin likely to continue—if so, we shall, of course, soon have a first-rate mine. The pitches are looking much as usual. We are now sinking the engine-shaft with all possible speed; the ground is very favourable; we have set the men 10 fms., to sink at 8*l.* per fm. The mine at present wears a very promising and gratifying aspect.—J. Dale.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINES.—Gold workings from the 3d to the 12th February:—5 lbs. 3 ozs. 12 dwts.

BOLANOS MINES.—The following is from a letter, dated Zacatecas, 19th February, received 24th April, per American packet *Rainbow*:—

"I am favoured with receipt of your secretary's letter of 1st December, and have now to report progress made in your different mines since last packet.

El Bote Mine.—I am happy to advise you, that ore has re-appeared in the west end of Guadalupe; it is now about 3 varas wide, mixed with some rubbish, but improving and increasing in width as we advance. The south cross-cut we opened near this end, got into the black slate of the country, and was stopped; the north one is still in vein stone, but without ore. The east end of Guadalupe continues in good ore, 6 varas wide. The rise of San Antonio has continued always in good ore, and as it is now about the level of Concordia cross-cut, I have opened an end west from this cross-cut to communicate with it. There is no reason why the ore should not be found to continue much higher, as it would appear that the Concordia cross-cut happened to strike the vein in a bunch of rubbish, whilst at a little distance it is in good ore; if it should so prove, we have almost a boundless field for breaking ore, above and on both sides, and the importance of the discovery cannot be too much enhanced; but further progress only can prove the reality. As soon as the communication is effected with San Antonio, I shall open an end east, and a rise from the Concordia cross-cut; at present we have no room to stow the attle, nor road to remove it. The winze of Guadalupe has been sunk about 6 varas without difficulty, by damming and baling out the water. This work has placed at our disposal, as a reserve, the whole bottoms of Guadalupe, the drainage of which will now give no trouble to the depth of this winze, or even deeper. But while three malacates are required to sink the shaft, and the fourth can barely raise 2000 cargas of ore weekly, we cannot raise more than we do at present; besides, it is prudent to keep a secure reserve, on which to rely during the long period which must elapse before we can get the next cross-cut home. The water in the bottoms of Guadalupe has become lighter—it has evidently found a vent into the shaft below the cistern, where a quick stream issues, requiring, as I have reported before, two malacates in the bottom of the shaft, and one only in the cistern, instead of the reverse. This was to be expected from the nature of the country, and it leads me to think there would be less risk in driving the Guadalupe cross-cut north to cut the other veins, than has generally been apprehended. I think it very likely that those veins will be found already drained to this level; and, at all events, as soon as we open the new cross-cut and cease working in the bottom of the shaft, I do not hesitate to say, that that cross-cut should be renewed—and as the lodes to be cut by it have been productive above, there is here also an almost boundless field for discovery. There is no improvement in the ground in San Fernando shaft, and the sinking is as tedious and costly as before advised. The new shaft of San Genaro continues sinking as heretofore.

San Francisco de Paula Mine.—The shaft will be to-day squared down 8 varas below the fourth cross-cut, and the sinking suspended: the cross cut will be resumed, and within 8 varas driving we may look for the lode. There is little variation since my last in the workings; the bottoms of the third level continue good, and to-day an improvement is reported in the west end of the "Communicacion." The west end of Rayas, which opened on very soft ground, has become so hard that barely a half vara per week could be gained—it has, therefore, been suspended, and a cross-cut opened north to join the first lode and the "Communicacion," and to advance on the latter to the winze of Buen Suceso. The north cross-cut of second level is now breaking into the lode we seek; the only discovery so far is a narrow thread of bronze. The south cross-course of San Bonefacio, in Loreto sett, is still in the great Rayas lode, in colorados, without ores.

Celestina Mine.—The only novelties to report since my last are, that the ventilation shaft has been communicated with the cross-cut from Mayorazgo level, and given a thorough ventilation to the mine; and that it would seem that the west end of 64 vara level has been driving for some time past, on the lower wall of the Mayorazgo lode which we sought. The junction of this lode with that of Celestina has always been insensible, and the course of our last month's progress corresponds with what the Mayorazgo should be at this level; no ore has been found in it, and the end has been suspended, and a cross-cut opened south to seek the hanging wall, in which the ore has always been found in our workings above. A winze also has been opened from the Entresuelo level, to communicate with the west end of 64 vara level, and prove the position and quality of the lode at that depth. The winze is sinking in a narrow thread of good ore. The future hope of the mine depends upon discoveries here; for if the ore should be found only in the upper levels, and to cease as we descend, we must soon come to an end of our present profits—but there is hitherto no reason to fear this result. The ends of Mayorazgo and Entresuelo have been driving in poor ground through the month, but we may expect improvement, as has frequently happened before.

Statement showing the General Results of the Mines and Haciendas in the Zacatecas District in January, 1847:—

Mines.	Profit.	Loss.
San Clemente Mine	—	$ 470 4 3
San Nicolas	—	460 5 7
Malanoche	$ 1851 3 7	—
San Rafael	—	3471 3 6
Loreto	—	410 2 2
Celestina	47 3 4	—
Haciendas	1236 5 2	—
	$3135 4 5	$4813 0 2
		3135 4 5
Balance of loss		1677 3 5
El Bote Mine—profit on the month		$8864 5 2

[No dispatches have been received from the Real del Monte Mines.]

SOUTH AUSTRALIAN MINING ASSOCIATION.

At the half-yearly meeting of the proprietors, held at the Auction Mart Tavern, Hindley-street, Adelaide, on the 21st October, 1846,

Charles Beck, Esq., in the chair,

the following report of the directors was submitted:—

In submitting an account of the transactions of the association for the past six months, the directors are happy to have it in their power to congratulate the scripholders on the very satisfactory results which have attended their operations during that period, and on the present prosperous state of their affairs.

Subjoined are returns containing the particulars of the quantity of ores raised at the Burra Burra Mines, by which it will appear, that the increase of the ore intended for exportation during the last six months, exceeds by nearly 90 per cent. the quantity produced during the preceding half-year, making the total quantity raised from the commencement of the mine (12 months since) 7200 tons; and a considerable improvement has taken place in the quality, the red oxide, malachite, and the richest descriptions of ore, now being predominant. These returns will show, that there has been a decrease in the quantity of ore carted during the last six months, which arises from the four winter months intervening during that period, when the roads are almost impassable, and not from any diminution in the number of drays. The directors do not apprehend any difficulty attending the carting of the ore, as there are now nearly 400 drays employed for that purpose, and, during the last week, 174 tons were delivered at Port Adelaide.

The mine never looked so promising as at the present time, there being abundance of ore in sight; and during the last month 1100 tons were raised, with every prospect of a continued large supply. The lodes generally have been discovered farther into the survey, and the workings are extending southwards. The present openings, or workings, consist of 29 shafts and winzes, the deepest being 144 feet (at which depth a lode of very rich ore has recently been cut), and they amount in the aggregate to 1860 feet in depth; also, 70 galleries or levels, the united lengths of which measure 7902 feet, or rather more than a mile and a half.

Up to the present time, the directors have not received advices from England of the positive worth of the ore, beyond the general opinion that it is considered very valuable—but they are expecting account sales daily. Two of the first shipments had arrived, and created some interest.

The directors regret the unavoidable delay in the smelting works, which has been owing to the difficulty of getting masons, and the pressing necessity for completing the cottages for the men. The building is now, however, far advanced towards completion, and they hope to be very shortly at work.

The township of Kooringa is progressing rapidly: in addition to the cottages belonging to the association, several allotments have been let to shopkeepers and others, who have erected some very creditable buildings.

The rents from these allotments, and other properties, at present amount to upwards of 200*l.* per annum. A paddock of 160 acres has been fenced in, and an 80 acre section has been let for a dairy farm. A subscription has commenced among the persons engaged at the mine, and the residents at Kooringa, for the erection of a building to be used as a school-house and place of worship, to which the directors have promised assistance, and hope shortly to commence the building.

Annexed is a statement, or cash balance-sheet, of the affairs of the association to the 30th September last. The directors, however, refrain from making any estimate of the value of the association's property, until they receive returns for the bulk of the ore already shipped, and beg to observe that the items at their debit—"Sundry creditors, 7837*l.* 7*s.* 6*d.*" consist principally for wages and expenses on the greater part of the ore at present at the mine, but against which they could not draw the usual advances made on shipment, or there would have been a balance in their favour. The amount 16,624*l.* 2*s.* 2*d.* (being the entire cost of the working of the Burra Burra Mines), when compared with the expenditure during the first half-year, and the quantity of ore raised, will be found to have increased, but is attributable principally to a large outlay during the winter months, for discovery work, in order to facilitate the raising of the ore, at a time when it can be carted and shipped, the advantages of which outlay have already been apparent.

The consideration of a deed of settlement has engaged the directors' earnest attention, and they will, subject to the approval of this meeting, cause a deed to be prepared, and lay the same before the scripholders for their consideration, either at the next annual meeting, or at some earlier period. As it must be some time before the proceeds of the greater part of the ore shipped come to hand, the directors do not expect they will be in a position to recommend a dividend before the April meeting; but, should the state of their funds warrant it before that period, the directors will call a special meeting of the scripholders for that purpose. In conclusion, the directors look forward to the forthcoming six months, with the hope that the result of the business at the end of that time will be as much in advance of the last half-year, as that exceeds the first six months, which they confidently expect will be the case.

From a detailed statement of the accounts, we find that the quantity of ore raised in 12 months, to September 30, 1846, amounted to 7200 tons, of which 2715 tons had been shipped to England, 3033 tons remained for cartage at the mines and in Adelaide, and 1462 tons were retained in hand for smelting. From the capital account it appears the company is Dr. to capital stock, 12,320*l.*; drafts on England for ores shipped, 20,624*l.*; creditors, 7837*l.* 7*s.* 6*d.*; and sundries, 413*l.* 18*s.* 10*d.*—together, 41,195*l.* 6*s.* 4*d.* Cr., by land and improvements, 13,663*l.* 4*s.* 3*d.*; wages, tools, implements, stores, &c., 16,624*l.* 2*s.* 2*d.*; cartage, 7857*l.* 11*s.* 2*d.*; shipping, freight, discount and interest, expenses of establishment, and sundries, 2951*l.* 0*s.* 9*d.*—together, 41,095*l.* 18*s.* 4*d.*: leaving a balance in favour of the company of 99*l.* 8*s.* From these extraordinary returns, we find that the Burra Burra Mine has returned, in 12 months, 7200 tons of copper ore, worth, on an average, 25*l.* per ton, or 180,000*l.*, at a cost of 16,624*l.*, or 2*l.* 6*s.* per ton; and that they have entirely cleared their expenses, with a balance of 100*l.*, and 3033 tons of ore still remaining on hand; and that the produce of the second half-year exceeded the first by near 90 per cent. These results have hitherto, we believe, been unequalled by any other copper mining property in the world.

TINCROFT MINING COMPANY.

The annual general meeting of the shareholders in this company was held yesterday, at the offices, 44, Finsbury-square.

Percival Johnson, Esq., in the chair.

The advertisement convening the meeting having been read, the following directors' report was submitted:—

DIRECTORS' REPORT.

The directors have much pleasure in meeting their fellow shareholders, and in reporting that the mine has steadily improved within the past year. Many circumstances have prevented the payment of more than one dividend in that period, which are detailed in Capt. Paul's report; but it is gratifying to the directors to be able to state, that the outlay made has placed the mine in a most efficient state of working, and that the present returns and prospects are such as promise the payment of dividends with more regularity. One item of expenditure is for the erection of an engine, and work for developing the Druid lode, which has not yet been wrought by the Tincroft Company, but which is now one of the most productive sources of returns in the Carn Brea Mines, into which the Tincroft sett extends. Mr. Johnson, one of the directors, has several times visited the mines in order to suggest improvements, which are now in operation, and by which an increased quantity at less expense will be the result. The directors, who are very large shareholders, are ever anxious to conduct the operations of the mine with all due regard to economy, consistent with efficient working of the mine, and the various lodes in the sett, and are sanguine of beneficial results. The directors have much pleasure in laying before you the balance-sheet, showing a sum of 1047*l.* 15*s.* 4*d.* in favour of the mine, after all liabilities have been paid, and which will show a balance of more than 2000*l.* had the copper ore and tin been sold, so as to show the profits realised by last month's working. In making up these accounts to so late a period as February, it is not necessary to compute one item—that of tin—which will not be got round for sale until the middle of May at the soonest; the parcel will, they apprehend, be about 1300*l.*, which estimate is grounded on the fact, that the machinery is now in a most efficient state for all duty which is required of it—independent of which, there is now on the mine, in the stone, and in process, 2000*l.* worth of tin to the end of February. The directors feeling that it may be satisfactory to the shareholders to learn the further estimate for March, are enabled to make it pretty nearly thus:—

Copper ores for sale 9th May	£2350	0	0		
Tin ditto for June	1300	0	0	—3650	0 0
The cost for March will be about				2600	0 0
Leaving				£1150	0 0
Which, added to the existing balance of				1047	0 0
Makes a total in favour of the mine of				£3197	0 0

Memorandum showing the application of profit during the 12 months ending Feb.:—

Wheal Providence engine and erections	£695	0	0		
Pit-work, &c.	130	0	0		
Engine and labour expenses, timber for adit—say, six months, at 150*l.*	900	0	0	—1725	0 0
Calciner and erection of same	£130	0	0		
New castings for ditto	65	0	0	— 195	0 0
Making				£1920	0 0
Balance against the mine at last annual meeting				4171	10 0
Eleventh dividend				3000	0 0
Cr. balance				1047	15 4
Total				£10,139	6 1

From the statement of accounts, it appeared that the costs for the five months, ending Feb., were 13,421*l.* 18*s.* 9*d.*; sundry disbursements, 286*l.* 19*s.* 9*d.*; interest 52*l.* 12*s.* 7*d.*; 11th dividend, 3000*l.*—16,743*l.* 6*s.* 1*d.*—By ores sold, 11,446*l.* 8*s.* 6*d.*; balance last meeting, 3215*l.* 10*s.* 5*d.*—14,661*l.* 18*s.* 11*d.*; further estimates and receipts account for February, 3129*l.* 2*s.* 6*d.*—showing balance in favour of the company, of 1047*l.* 15*s.* 4*d.*

CAPTAINS' REPORT.

It would have been much more pleasant for me to write you on the present occasion, had you received three or four dividends since your last annual meeting, although my endeavours have been to do the best I possibly could for the interest of the shareholders. In my last yearly report, I had to enumerate several heavy items of expenditure, to show why it was, that after receiving 9000*l.* in dividends in the first three quarters, that 4171*l.* 10*s.* 9*d.* was shown against the mine at the meeting. This year, I regret to say, we have had but one dividend of 3000*l.*, and, although I do not like to be always harping upon the same string, yet I must be, to remind you, that in addition to your paying a dividend of 3000*l.*, you have cleared off the balance of 4171*l.*, which of itself will show that we have made a profit of 7171*l.*; another fact is, that we have purchased an engine for the Wheal Providence part of these mines, which, with the erection, cost 600*l.* The engine-house and materials for the erection cost 95*l.*; we have laid out for pit-work and capstan-rope, 130*l.* The cost to work the engine, with the labour and heavy expense in timber to clear and secure the adit, have been for the last six months 150*l.* per month, equal to 900*l.* We have purchased a calciner for the tin, which, with its erection, cost 130*l.*; and the last thing which I shall name in this way, is an accident to our old calciner, which has been in constant use for the last 10 years, and, being for that time exposed to intense heat, had become weak, and broke; we, in consequence, have been obliged to use the one which was purchased at Godolphin, and which had been but just brought into the mine to replace the old one, then become unfit for use. The new castings, which we have been obliged to get for the new calciner, have cost 65*l.* These sums added, will make 1920*l.*, and, but for these things, we should have given about the same profit this year as last. You must be aware, that the breaking of a calciner in such a mine as this, must have been attended with very serious consequences: the fact is, that we have been thrown back nearly a month in our tin sales. I am now happy to say, that we have got the new calciner to work, and it is doing exceedingly well. We shall soon be able to get up our sales of tin to the proper time in each month, just as you would wish it to be.

I will now proceed to a statement of ground laid open in the different parts of the mine during the past year. In the first place, allow me to say, that we have laid out about 1729*l.*, as shown before, in an engine, erecting the same, pitwork, timber, labour, clearing the engine and two other shafts, and the adit, so as to let the water go through it at Wheal Providence, instead of drawing it to the surface. We have now accomplished the work, towards which Lady Agar has given us 150*l.* Cook's Kitchen adventurers have paid us 50*l.* towards the 100*l.* agreed on; the remaining 50*l.* will, I have no doubt, be forthcoming in a short time. We are now clearing the said adit east, as fast as possible; and as soon as we can take up the water at the different shafts, we shall immediately commence clearing the mine below. I have examined the Druid lode in the back of the aforesaid adit, and like its appearance very much: I have no doubt of its being found very productive in depth, and believe the money you lay out in this part of the mine will be to your ultimate advantage.

In the south mine, on Highburrow north and south lodes, and on Chapple's lode, we have laid open ground during the past year, to the extent of 214 fms. 5 ft. 3 in., in sinking shaft, winzes, and driving levels; and I think I may venture to say, that we have not laid open better tin ground for years past. We have 30 pitches working in this part of the mine, at an average tribute of 9*s.* 8*d.*, employing 82 men, besides boys—the tributers pay for dressing their own ore. We have two pitches working on Chapple's lode by 10 men, at an average tribute of 4*s.* 7*d.* from 20*s.* This lode, so far, has had but a partial trial in Tincroft, but from its present appearance, we are encouraged to more vigorous operations on it.

The appearances of Highburrow lode, in the different levels, are very encouraging, more especially in the 142 east, where we have passed through some very productive ground; but, for want of proper ventilation, cannot set any tribute on it for some time to come; we are, however, sinking a winze below the 120 fm. level (now down 6 fms.), and are rising against it from the back of the 142; the lode in each place produces good work for tin, but I think it will occupy six months to communicate, after which we anticipate raising a great deal of tinstuff from the back of this level at a moderate tribute—say, 7*s.* or 8*s.* In the north mine we have laid open 314 fms. 4 ft. 3 in. in sinking engine-shaft, winzes, and driving levels; most of this ground will work on tribute; but I am sorry to say, that the different ends at this time are not so good as heretofore; we have 43 pitches working in this part of the mine, at an average tribute of 8*s.* 7*d.* in the 11.

At Palmer's shaft, on East Pool lode, we have laid open 90 fms. 1 ft. 4 in. of ground by sinking shaft, winzes, and driving levels—most of which will work at a moderate tribute. It has been a matter of sincere regret to me that we have not been able to do much more in this part of the mine. The suspension of East Pool engine has let the water in upon us, and prevented us from raising about 30 tons of copper ore per month for the last three months. The loss of this ore—though for the time—with additional cost to keep the water in our north mine, has taken all of 100*l.* per month out of our profits. I am glad to say, that arrangements have been made—so that East Pool engine is again working; and I hope we shall be able to employ our full number of men in this part of the mine in two months more. We have already set 10 men to work—two men driving the 36 west, on the south part of East Pool lode; the lode in this end is 18 in. wide, producing some ore, and kindly. We have one pitch in the back of this level, working by four men, at 3*s.* 6*d.* in the 11; two others in the back and bottom of the 48 fm. level, at an average tribute of 11*s.*

We have sunk Stainsby's shaft 26 fms. 2 ft. 10 in., and is now down to the level of East Wheal Crofty deep adit, which we have been obliged to abandon, in consequence of the water being so quick, that we could sink no farther. We are now in course of driving up the adit to this shaft, and hope to reach it in six months; or, should the ground continue as at present, it may take a month or two more. In East Wheal Crofty a great deal of ore has been raised near this shaft, and, no doubt, we shall meet with the same lode in our sett. As the summer advances, we hope to be able to sink the shaft, even if the adit is not communicated. We sampled, on the 21st April, 527 tons of copper ore, which will be sold on the 6th proximo; had Palmer's been at work, we should have made it, without doubt, full 600 tons. I have this day sold 863*l.* 12*s.* 9*d.* worth of tin, and may

safely calculate on 900*l.* worth for the next sale, which I hope will be in less than four weeks. In addition to this, we have full 2000*l.* worth of tinstuff and slimes on the mines. We have been constantly adding to our stock of materials, and are in good working condition, with fair prospects of success in the different parts of the mines.—W. PAUEL.

THE CHAIRMAN then went through the several items of the accounts, observing th t, although it would be seen that at the last annual meeting there was a balance against the mine of upwards of 4000*l.*, and the amount they had expended in machinery was considerable, there was yet a balance in favour of the company of upwards of 1000*l.*—Mr. FIELD, on looking over the accounts, observed, that they were not signed by the auditors, when the CHAIRMAN read a letter from Messrs. Mackay and Iselin (the auditors), in which those gentlemen stated, that they had not had sufficient notice to go properly through the accounts; and that not having done so, they, of course, could not sign them. —A long discussion took place, from which it appeared, that the auditors wanted a complete set of books, kept by double entry, similar to merchants' accounts.—To this, the CHAIRMAN answered, on the part of the directors, that the monthly cost-sheets, which always laid on the table for the inspection of the shareholders, and the book into which an abstract was copied, always showed the liabilities of the company; and that, from the practice of carrying the debit of goods received in one month to a future month's account, it was impossible to have a nearer approximation to correctness than was exhibited by the present system. The directors were quite willing to adopt any plan the shareholders might desire; but no system could show more clearly the state of accounts, the amount paid for labour, and the quantity and price of materials, than the one adopted: he believed there was not a mine in Cornwall in which the practice of carrying portions of a heavy month's expenses to a future month did not exist.—After a very lengthened conversation, a resolution was passed to adjourn the meeting to the 2d of June next, when Capt. Paul was to be desired to attend; and that, in the meantime, the auditors were to be furnished with all books and papers, either from Cornwall, or in London, which they might require.—A vote of thanks was then passed to the chairman and directors, and the meeting separated.

WHEAL CONCORD MINING COMPANY.

A special general meeting of proprietors was held at the offices, King-street Cheapside, on Tuesday, the 27th inst., pursuant to circular.

PETER DAVEY, Esq., in the chair.

The minutes of the proceedings of the committee since the last meeting having been read by the secretary, the CHAIRMAN briefly opened the business of the day by stating, that no report had been prepared to submit to the meeting, as such was indeed unnecessary, from the circumstance that reports received from Capt. Clymo, the resident agent, and the correspondence which had taken place on the present position of the mine, and the balance-sheet which would be submitted, would at once place before the shareholders all the information which the committee possessed; and it would be for them to determine the course to be henceforward pursued.—Letters from Capt. Clymo, under date the 8th, 15th, and 21st April, were accordingly read. These letters, we may observe, *en passant*, have not appeared in our columns under the head of Mining Correspondence; and we cannot but here express our opinion that it is unfair, and we may even say dishonest, to publish reports when they assume a cheerful character, and at the same time to cushion reports which are adverse. The object ever should be, fairly to put before the adventurers and the mining public "the truth, the whole truth, and nothing but the truth." Unfortunately, such has not been the course observed by the committee of Wheal Concord. It appeared from the correspondence read, including a letter from Mr. G. W. Snell, the purser, that the committee had taken upon themselves to order the suspension of the workings, giving the agent to understand, that all operations would in all probability cease at the end of the month; and, moreover, postponing the pay-day from the 1st to the 8th May;—the result of such orders being given was, that two-thirds of the miners employed turned out and left the mine, the present not being the first irregularity which has taken place as regards the pay. Again, Mr. Snell, as purser, considering that the act of the committee was not warranted or justifiable without a meeting of adventurers being first convened, and authority obtained from them to suspend the workings, took upon himself the responsibility of writing to Capt. Clymo, giving instructions that the mine should be kept on working. It is, perhaps, not exactly our province to offer any remark on the acts of a committee or a purser; but we cannot help saying, that we think they might say to each other, "Brother, brother, we are both in the wrong!"—while, by these orders and counter-orders, Capt. Clymo was placed in a position not the most enviable, for it is hard to "serve two masters."

The correspondence having been read, Mr. SNELL rose for the purpose of stating the particular object of the meeting, which was to determine the course to be pursued, such determination being the voice of the adventurers, and not the committee, who, he contended, had no power to take measures which were calculated so much to injure and destroy the property of the company. As regards the purser, he had an undoubted right to countermand the orders given by the committee—for had he not done so, he would have been a *particeps criminis*, with a knowledge of the acts of the committee. He (Mr. S.) had no hesitation in saying, that if the course recommended by the committee had been adopted in the absence of any meeting of the adventurers, that the committee would have been liable for any injury which the company, or any member, might sustain therefrom; and hence the act of the purser to hold himself clear from any such liability.

The CHAIRMAN considered it due to his colleagues and himself, to offer one or two observations on the remarks made by the last speaker, as related to the order for the suspension of the workings, and the course taken by the committee. In the first place, he must inform the meeting, that the committee had dwindled down to three members—viz., Mr. Pickering, Mr. Morrison, and himself. They were willing to stand to their post, but it was indispensably necessary that some determined measures should be resorted to. The meeting had heard the correspondence which had taken place within the past fortnight, and the accounts then upon the table, although showing only a deficit of 125*l.*, would be augmented to at least 800*l.*, from the non-payment of arrears of calls, and the current month's cost. Now, he would put it to any shareholder present, whether the committee would have been justified in continuing an expenditure of 300*l.* to 350*l.* per month, without the means of meeting it, or the arrears which had already accumulated. It was true, that the engine and materials might, if sold, pay the costs already incurred, with a trifling balance in hand. He, for one, had a high opinion of the mine, and would willingly go further; but he had no hesitation in saying, that they had arrived at that point when they must determine on one course or other—either to dispose of the mine and machinery by private or public sale, or at once provide the necessary means of prosecuting it, which, he must confess, he did not see very clearly. He begged their particular attention to the statement of the finances of the company, which would, doubtless, govern them in the opinions they might entertain, and the resolution at which they might arrive.—The accounts were then read, whereby it appeared that the amount of liabilities was 1703*l.* 3s. 1d., added to which the April cost—say 300*l.*—made a total of 2003*l.* 3s. 1d. due from the adventurers. This, however, was in a great measure met by the calls made. The chairman, however, on referring to the accounts, observed that they had not been audited; and he, therefore, recommended the appointment of auditors for such purpose. The meeting must understand, that looking at the accounts as they then stood, there was a deficit of 800*l.*, as it was quite clear that some of the arrears of calls would not be recovered, and the shares might be considered almost valueless. As regards the present state of the mine, he did not believe there was any immediate prospect in justifying him to state that any extent of ore would be raised during the next month.

Mr. CROFTS (the secretary), observing Mr. English present, begged to call his attention to a report which appeared in the columns of the *Mining Journal* of Saturday last, to which that gentleman's name was appended. He did not know whether such was a forgery or not, but as Mr. E. had lately been on the mine, he thought it highly desirable to have his opinion, *ore rose*, on the prospects it presented, and the course he would recommend.

Mr. ENGLISH, in reply, could only refer to the report which had been adverted to by Mr. Crofts, as giving a fair statement of the present position of the mine, for the correctness of which he could only refer them to their own agent, who, he felt assured, would fully bear him out in every assertion he had made. He had been requested to institute enquiries as to the prospects which the mine presented, as well as its present state; and, while he expressed his opinion that the mine would doubtless, if fairly worked, be productive, he could not conceal from the meeting, that justice had not been done to the mine, to the captain, or the adventurers. The mine had been "robbed" by "picking out its eyes;" while not a fathom of ground had been sunk, or 10 fms. cross-cut driven. An engine was at work at a heavy cost, with agents' salaries and other charges, and there was only one opinion which he, or any one else looking at the matter, could arrive at—which was, that the sooner they made their loss the better, without they intended to alter the system, and subscribe the necessary funds for the active working of the mine. As evidence of the opinion entertained of the value to be attached to the lodes running through the sett, he might mention, that immediately adjoining west, the Wheal Grace adventurers had put an engine to work on the same lodes, within 36 fms. of the boundary.

Mr. PEGG fully concurred in the opinion expressed by the chairman, as to the absolute necessity of some decisive measures being adopted, but he, for one, did not think they should hastily arrive at the conclusion, that because their finances were low, they must needs wind up, and sacrifice all that had been heretofore expended. He, for one, was ready to proceed further; and the opinion he entertained of the mine, as to its value, had been fully borne out by others. He would suggest that the course pursued in other mines, and that successfully, should be adopted in the present instance; and that an increased capital might be raised, not only to meet the present liabilities, but to prosecute the working of the mine efficiently, by the creation of 1024 extra shares, or, in fact, doubling the present number of which the company was constituted, such shares being issued at 30*s.* or 40*s.* per share, an option being given to the present adventurers to take them *pro rata*, and if any should remain, then that the same should be offered to the public.

Mr. MORRISON thought the plan good, and one calculated to effect the desired object; indeed, it would be a suicidal act to abandon the mine at this moment; more especially as Wheal Grace, the adjoining mine, was only now going to work in earnest, and which ought, in itself, to hold out encouragement.

Mr. PICKERING, as a large shareholder and a member of the committee, was surprised and pleased at the turn taken in the course of the discussion, and most readily did he fall into the views proposed by Mr. Pegg, to whom he considered the adventurers were indebted for steering a course which, he had no doubt, would meet all difficulties. He (Mr. Pickering) had an excellent opinion of the speculation, and if the arrangement proposed be carried out, he did not feel any doubt as to the results, knowing that parties would readily come forward and take up the shares, should any of the adventurers decline doing so, which, however, he could hardly imagine.

It was subsequently moved, seconded, and carried unanimously, that it is desirable to increase the capital of the company by the issue of 1024 shares, at 30*s.* per share, the same to range in like manner with those of which the company is now formed, and that a special general meeting be called on an early day, then to take into consideration and determine on the same. A resolution was also passed, giving power to the committee to limit the operations at the mine as they might see fit and expedient. Messrs. Harris and English were appointed auditors, to pass the accounts submitted, which were received, subject to such audit. Thanks having been passed to the chairman, the meeting adjourned.

NORTH-EASTERN MINING COMPANY OF IRELAND.—At a general meeting of adventurers, held at Manchester, on the 7th April—JOHN W. BOOTHMAN, Esq., in the chair, the books and accounts of the company having been examined, it was proposed by SAMUEL BREWIN, Esq., and seconded by JAMES HAMBLETON, Esq., that the company's mines are now in such a position, that it is expedient to increase the number of shares from 200 to 512, in order more effectually to carry on the works; that 212 of such shares be at present issued at 10*l.* each, the remaining 300 being taken by the present adventurers; and that Capt. Skhuming, the managing agent, be now authorised to proceed to London, in order to carry out such extension.—Several other resolutions having been passed, relative to the future working of the mines, thanks were voted to the chairman, and the meeting separated.

EAST WHEAL ROSE.—The following are the particulars of the account for January and February:—

1847—Jan.—Costs this month			£2196	16 1
Surgeon and club			31	15 3
Feb.—Costs this month			2274	7 4
Surgeon and club			31	4 6
Bills three months			1781	1 10
Income tax, 100*l.*; coals, 379*l.* 10*s.* 7*d.*			479	10 7
Discount on ore bills, 36*l.* 1*s.* 3*d.*; dues, 876*l.* 0*s.* 1*d.*			911	1 4
New lost			55	0 0
Moiety of purchase money of North Wheal Rose			2000	0 0
Dividend of 40*l.* per 1-128th share			5120	0 0
Balance			2702	3 5
Total			£17,578	5 4
1846—Dec. 31.—Balance of last account			£4043	18 0
1847—Jan. 9.—Proceeds of lead ore sold this day			2847	10 4
22.— Ditto ditto			3362	0 9
Feb. 5.— Ditto ditto			3786	19 11
19.— Ditto ditto			3460	7 3
Cargoll adventurers, for driving, water-charge, &c.			96	15 11
Discount allowed by Messrs. Harvey and Co.			19	13 2
Total			£17,578	5 4

CARADON CONSOLS.—A meeting of adventurers was held at the account-house, on Tuesday, the 20th of April, when the two shares, relinquished by Mr. Yelland, were disposed of to Mr. Hambly and Mr. Rendle, and the purser was authorised to enter the same in the cost-book. A communication having been received from Mr. Simon Peter, on behalf of the trustees of the estate of Mrs. B. H. Lyne, requesting a further delay respecting the payment of the arrears of calls due on her interest, it was resolved—that the purser be instructed to address a note to the said trustees, requesting their earliest possible attention to the arrears now due on the said shares; inasmuch, that no relinquishment of shares having been received, with the exception of the above Mr. Yolland's, and the report of the mine this day submitted being so satisfactory, it was resolved—that a call of 1*l.* per share be made, for the further prosecution of the mine, which is earnestly requested to be paid forthwith to the purser, or at the East Cornwall Bank, Liskeard.—The following report, from Capts. James Clymo, C. Trewren, and R. Rule, was read to the meeting:—We find the lodes in the different levels much more kindly than we expected to see them. In driving west at the 27 fm. level, on the main lode, it is about 16 in. wide, composed of good yellow ore, fluor-spar, and peach—this we consider a very kindly end, as we are here clear of the elvan course, and there are strong indications to expect a further improvement. The lode at the 37 fm. level, driving east, is 3 ft. wide, composed principally of peach, fluor-spar, and spots of copper ore—this end should be extended east with all speed, in order to get clear of the elvan course, which is now being done. From the foregoing, you will perceive we strongly recommend the present mode of proceeding, as there is every probability that, by so doing, you will, ere long, be remunerated for your outlay and perseverance.

CARADON WHEAL HOOPER.—At a general meeting of shareholders, held at the White Hart Inn, Launceston, on the 23d April, the accounts were examined and passed, from which it appeared that the labor cost and bills for five months, ending March last, had been 704*l.* 9*s.* 8*d.*—Credit, by balance from last account 39*l.* 3*s.*, calls received 697*l.*, together 736*l.* 3*s.*, leaving balance in favor of the mine, 31*l.* 13*s.* 4*s.* The balance on the arrears of calls and cash at bankers, compared with unpaid bills, &c., was 145*l.* 4*d.* in favour of the adventurers.—It was resolved that the resignation of Mr. Vanheuse, as auditor, be accepted, and that Mr. Huxham be the future auditor.—A call of 1*l.* per share was made, and the following report from Capt. Seymour was read:—The shaft at Wheal Hooper is now 48 fms. 2 ft. deep; at the 46 fms. we cut a branch of ore and mundic, which increased to 2 ft. in width; this branch is now left, as we purpose sinking to 50 fms., which we shall accomplish in a month, when we shall be in a position to drive to intersect the whole of the lodes, which I believe will prove productive at this level. I forbear making any further statement at present; but beg to refer you to Capt. Foull's report of this mine, which appeared in the *Mining Journal* of April 3. I cannot but congratulate the adventurers on the prospects of the mine, and trust that it will, at no distant period, give more satisfactory proof than I can express.

COOMBE VALE CONSOLS.—At a general meeting of shareholders, held at the King's Arms Inn, Launceston, on Monday, the 19th April; the accounts having been presented, showing balance against the mine of 78*l.* 5*s.* Id., a call of 1*l.* per share was made; and Capt. J. B. Clymo (of Wheal Concord), requested to survey the mine. The following report has been addressed to Mr. J. T. Pearse:—"*Wheal Concord, April* 23.—According to request, I was under ground in Coombe Vale on Wednesday last, and now send you my views relative to the prospects of the mine. In the 36 fm. level a north and south lode has been intersected, and opened on 23 fms. south from the cross-cut, and 15 fms. north. This lode appears very regular and well defined; its composition is decomposed clay slate, averaging about 18 in. wide; in which, for the greater distance opened on, there is a leader, or branch, of quartz, silver-lead, and mundic, varying from 2 to 6 in. wide. The lead is said to produce, by assay, 84 ozs. of silver to the ton of ore, which shows it to be of excellent quality. Below the 36 two winzes have been commenced—the south one 6 fms. behind the end; it is 5 fms. deep, in which the lode is much the same as in the level; the north winze is 9 fms. behind the end, and is 4 fms. deep; in it the lode is divided into two branches—the eastern one 4 in. wide, and the western one 9 in. wide—both branches produce a little lead. The south end (36) has been extended near to the boundary, and is now idle; here the lode is 2 ft. wide, chiefly flookan, with a leader 3 in. wide, of lead and quartz; the end north is still being driven, but the lode has not been taken down for the last 2 fms.; where it can be seen it is 9 in. wide, spar, spotted with lead: thus you have silver-lead ore, more or less, at all your points of working; and, although the lode is not rich, the ground is easy, and some parts of it will pay for working at high tribute, which I advise to be set. There is a branch in the 36 cross-cut dipping towards this lode, with which it will form a junction at the present inclination, 8 or 10 fms. below the level; this may be considered a favourable circumstance, inasmuch as it is often the case, that, when two lodes unite, a rich one is the result. In sinking the winzes below the 36, another pleasing feature is discernable—below the level the inclination (underlie) of the lode east is about 15°, whilst, above the level, it is about 37°: now, it has frequently been proved, that lodes increase in richness as their dip becomes more vertical. This theory is corroborated even in this lode itself; for, where the angle of inclination was great in the upper level, the lode was unproductive; but now the angle has become small, the lode has assumed a productive character. To prove this lode conveniently, a new perpendicular shaft should be sunk about 35 fms. east of the present one, to take the lode 10 fms. below the present bottom, by which the lode could be more economically explored; and it would otherwise be of immense service for discharging stuff, ventilation, &c. As the stratum is killas of a soft texture, the work might be accomplished in a comparatively short time, and for a small expense; and it would enable you to prove the east and west copper lode without difficulty."

WHEAL SETON.—At a meeting of adventurers, held at the account-house, on Tuesday, the 13th April, the accounts, having been examined, were allowed, and a dividend of 20*l.* per share declared; the balance of 2036*l.* 2*s.*, in favour of the adventurers, to be carried to the credit of the next account, to be held at the mine, on Tuesday, 8th June.—The following is a statement of accounts:

Amount of costs for January			£1155	19 11	
Ditto ditto for February			829	2 10	
Merchants' and foundry bills			1033	16 5	—3018 19 2
1846—Dec. 31.—Copper ore sold			£1542	15 9	
1847—Feb. 4.—Ditto ditto			3700	12 6	
Blende ditto			114	9 0	
			£5357	9 3	
Less dues			356	15 10	—5000 13 5
Making the sum of					£1981 14 3
To which add balance due from purser to end of Dec.					2034 7 9
Total					£4016 2 0
Deduct dividend of £20 per share					1980 0 0
Leaves now in hand					£2036 2 0

The following report from Capts. Paul Rabey and Stephen Lean was read to the meeting:—There is nothing done in the 90 fm. level east, on Bull's-lode, since the last account—the men being employed in taking down the lode in Bull's shaft, dividing it, &c., they are now in a position to resume the working in the 90 east, which will be done without delay. At the 80 fm. level west, on the south caunter, the lode is 2 ft. wide, containing stones of copper; we have intersected Kneebone's branch here in the past week, which is 3 ft. wide, composed of spar, mundic, and stones of ore. The 70 fm. level west, on ditto lode, is 2 ft. wide, more promising than when last reported on, being now free from the slide, by which it had been disordered. In the 60 fm. level west, on ditto, the lode is 6 ft. wide, and worth 40*l.* per fm.; the stopes, in the back of this level, are worth 40*l.* per fm. The winze sinking below this level is down 9 fms., lode worth 15*l.* per fm. In the 80 fm. level west, on the north caunter, the lode has been worth 50*l.* per fm., but is now worth 60*l.* per fm. We are carrying the rise in the back of this level about 6 ft. of the lode, which is worth 60*l.* per fathom; there are 2 fms. further to rise, to communicate to the winze, which is sunk 7 fms. below the 70, but we were obliged to suspend operations in consequence of the water. In the 70 fm. level, west on ditto, the lode is 6 ft. wide, and no south wall; worth 40*l.* per fm.; the stopes in the back of this level are still worth 150*l.* per fm. In the 60 fm. level, west on ditto, the lode is worth 140*l.* per fm.; the stopes in the back of this level are worth 150*l.* per fm. In the 50 fm. level, west on ditto, the lode is worth 20*l.* per fm.; the lode in the rise, in the back of this level, is worth 40*l.* per fm. The 40 fm. level, west on ditto, lode is still disordered by a limb of a cross-course. The ground in the 60 cross-cut north is favourable for driving. Tilly's shaft is in course of sinking below the 90 fm. level down 4 fms.—ground favourable. Cock's engine-shaft is now in good condition, and the pitwork nearly completed, and will be in a state of working by the end of this week.

ALLEGED IMPROPER CHARGE FOR PURCHASE OF A MINE.

SIR,—Does it come within your knowledge, that when a prospectus (either printed or privately circulated) of a mine is given to adventurers, containing such [illegible]ons as (after a description of the old workings)—"Of all this the new proprietors will have the *advantage*;" and, further, that "the present capital is principally required for machinery—therefore, the shareholders will be secured against total loss"—do you know, I repeat, if it be usual, after such a prelude, for directors to make a charge (say 1600*l.*) for the purchase of the mine—such charge appearing for the first time at a meeting, long after the formation of the company, and never having been promulgated, or even hinted at, to the first proprietors.—A NOVICE: *London, April* 29.

OPPOSITION IN MINING.

SIR,—Those persons who are acquainted with mining affairs, are well aware of the disappointments attending the same, and the difficulty there is to induce capitalists to embark therein. The extensive range of this interest lies beyond the possibility of a monopoly, and the requirements of its almost innumerable dependents are not to be met by the capital and influence which the greatest combination can produce; so that the extension of the field, and the value of the prizes, are, and certainly should be, a legitimate source for the speculator of hundreds as well as of thousands, especially as the whole is scarcely sufficient to meet the world's demand for mineral produce. And if this be true, it is one of the anomalies of the present day, that persons can be found whose saddened experience must write "implicit" upon such truth, and yet whose energy and influence are employed to counteract the exertions of others, who, though connected to a local interest, are promoting the general good.

To suppose that mining talent, however high its character, is to be decisive by some Euclid law is a farce, which the existence and profits of every mine would scornfully reject. To imagine that management well chosen, and better regulated (though without control of a London board to drive ends and set pitches), is to be unerring in judgment and in practice, is the ideal of some lunar subject. But to fix the value of a mine by the extent of failure, without prosecution—to cry down its poverty by the amount of capital expended, and the perfection of its government, and to deter the speculative by a programme of utter failure—is the work of selfish animosity and wickedness.

But such is the case: persons are to be found, who labour to crush in the bud every adventure in which they have no chance of a sinecure; and should it happen that they have been at all engaged in it in any former working, their phrensy becomes rampant; and, setting at defiance every principle of philanthropy, they unblushingly exhibit their own jaundiced countenance, as a triumphant proof that a more healthy hue can never be expected in any case which their experience has pronounced hopeless.

Cases might be named, in which "Opposition" has been successful to ruin; and here it would be painful to reopen the wound, but where triumph has been on the opposite side, it cannot be offensive; and, as the beginning of such cases, the Polgooth Mine, in the parish of St. Austell, is an instance. It appears that the setts were obtained by the present manager, and a company formed; but before the first call was paid, the very promoters of the scheme, who had enlisted themselves as shareholders, from some cause (unexplained, though well known), backed out to the extent of a quarter part of the entire interest; but his enterprise and perseverance soon replaced this with much greater strength. Preparations were now commenced, and machinery purchased—and here the struggle began. Written reports, of no ordinary length, were flying in every direction; personal influence was employed, and even salaried agents were in the field, to put down this daring attempt at resuscitation after the death warrant of another. The immediate effect was a panic of overwhelming abandonment: and no man can look at the time when these thrusts were made, without remarking, that they were well chosen for the work of absolute destruction. At this juncture, the manager appealed to his principals, and challenged under every form, of person, document, or "paw;" the array was formidable, but it was taken bit by bit, until Opposition was pale in silence; and, from eating his own words, denying his own works, and slandering his own judgment, had well nigh given up the ghost: the result was, cost was freely offered, and capital was at command; but Opposition was not dead; from that time it has used the dagger in darkness, shot its darts of malice and envy under the cover of lying personalities, which the columns of the *Mining Journal* can testify: But facts are clear. On this mine machinery is erected, the water is drained to the 66 fm. level, tin ground is found to a vast extent, and, in some cases, worth from 40*l.* to 50*l.* per fm.; some 150 or more men are employed on tribute, at from 3*s.* to 9*s.* in the 1*l.*; and the actual sale of tin on Saturday last, for only four weeks, amounted to 1086*l.* 11*s.* 9*d.*, with the certainty of a gradual increase—so that, when two more steam-engines shall have been added to the three already on the mine, the whole outlay will scarcely reach the manager's first estimate, whilst Opposition vowed itself into madness, that *three times* that capital would be insufficient; but she is launched, and has every prospect, not only of feeding her thousands, but of giving up her wealth. The vilifications, rival reports, absurd contradictions, and insinuating slander that abound, is almost enough to close every channel of enterprise, and bring into contempt an interest on which multitudes are depending for their daily support, and which, both as a speculation and an investment, has poured its treasures into the lap of thousands. That truth should be spoken, and error exposed, is the pride of every honest heart; but, as it regards mines being worked out, the prospective value of lodes, or the certainty of defining their character, the truth is this, and only this—"*where it is, there it is*;" and to this the most daring talent has been obliged to bow—for experience is almost universal, that a little more, or a few fathoms only, would have reached the prize. If "Opposition" should be silent with remorse, and sleep into oblivion, he may dwell there; but his very shadow must be the signal for war, until his name, his abode, his character, his emissaries, are dragged to the public executioner, where Truth itself shall bind him in the eternal pillory of scornful contempt.

St. Austell, April 28. PLAIN DEALING.

WHEAL BARBARA MINING COMPANY.

SIR,—Having an interest in the above mine, and having been in town for a few days, I called several times at the office, and could find no one there: can you, or any of your correspondents, inform me what is doing at the mine?

Tilbury, April 29. T. B.

COLOMBIAN GOLD MINING ASSOCIATION.

SIR,—As great dissatisfaction prevails amongst the shareholders in this company at the non-publication of the reports received monthly from the mine agents, I doubt not it only requires that the attention of Mr. G. D. Powles be drawn to the matter to set it right—since, from Mr. P.'s position in the city of London, he would not allow anything in his control to continue with the suspicion of unfairness attached to it. I hope, therefore, to see in future what I have so long looked for in your columns—viz.: the Colombian Mining reports, the want of which has long been severely remarked on.

Park-lane, April 28. O. P. Q.

[We shall very readily afford space for the reports, as received; or for so much of them as the directors think may prove of interest to the shareholders, and the latter are content with finding in our columns.]

MINING IN ASHBURTON.—This district is likely to become an extensive one in mining operations. About a mile from the town are situated Whiddon Mines, which, until within the last few months, have not been worked since the year 1810; at that period they were not carried on with much spirit, and the shaft was not sunk much below the adit, only from 20 to 30 fms. The mine at that period had appearances of containing lodes of tin, &c.; a few months since a company of adventurers took a lease in the mine, and it is now proceeding with great activity, a large water-wheel has been erected, and a lode of tin, several feet big, has been discovered. This mine causes a large amount of wages to be paid weekly to the labourers, and we heartily congratulate the lucky shareholders in their whole undertaking. The tunnel, which is cutting at Penn Hill Slate Quarry, is progressing very satisfactorily; some of the shareholders attended on Tuesday, when several explosions were made with gun-cotton, and they proved highly interesting to those who witnessed its results. A communication with the quarry pit is likely to take place about July next. The pit is now 200 feet deep, and contains several thousand hogsheads of water, which will be carried through the tunnel on its completion. The slate at this quarry is of large size, of a blue tint, and considered equal to the Welsh slate.—*Plymouth and Devonport Journal.*

ACCIDENTS.

Boiler Explosion—Crook-hall Iron-Works, near Shotley Bridge.—The boiler of the steam-engine at these works burst with a tremendous explosion, by which three men and a woman were killed, two persons dangerously injured, and several others much hurt. The works are the property of the Derwent Iron Co.

Netherton Old Colliery, Cawley.—W. Smith was killed by a fall of coal.—This colliery (the property of Messrs. Grazebrook) is very carefully worked by Messrs. Attwood and Pearson, who are known to use every precautionary means to make it as safe as possible for the workmen.

Milford, Derbyshire.—T. Sculthorpe was killed in a quarry here.

Newbury Lane Colliery, Round's Green, Oldbury.—As H. Blakemore and T. Salter were taking out a "standing nob" in the pit, a quantity of coal fell, by which Blakemore was killed, and Salter severely, but not dangerously, bruised.

Stow Heath, Wolverhampton.—R. Morgan was killed by an explosion of fire-damp at Mr. Sparrow's Colliery. It was stated by witnesses examined at the inquest, that the pit was properly worked, and that the "doggy" had tried it with a lighted candle previously to the men commencing their work in the morning, when there were no traces of fire-damp. It appeared that Morgan had

accounted for the accident, by stating that he held his lighted candle too high in the workings, whilst pulling down some dirt which was above him.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

COOMBE LAWN.—The greater proportion of the shares in this mine, which is better known as Wheal Elizabeth, situate within a mile of Callington, has changed hands within the past few weeks; and, from the circumstance of a large majority being held by two or three individuals in London possessing not only capital, but enterprise, it is expected that successful results will attend the operations, and which may be expected to be of an active nature, from the measures already taken. Nine or ten lodes have been opened upon, and are to be seen at surface, and the lead ore raised contains a large produce of silver, ranging from 20 to 80 ozs. per ton. The reports of the workings will appear from time to time in our columns. The mine is divided into 500 shares, and will be carried on strictly upon the Cost-book System.

GREAT SOUTH TOLGUS MINE.—The 40-inch cylinder engine complete, purchased for this promising adventure, has arrived upon the mine, and the house to receive it is in progress—as many masons as can come to work being employed for that purpose, and it is expected that it will be set to work in the early part of June month. This mine was wrought formerly to a 40 fm. level only, by means of a water-wheel of inadequate power, and the sump is down to a 50 fm. level. It will now be wrought, for the first time, by steam; and, it is thought, by competent miners, likely to prove a valuable undertaking. If good locality is any criterion, there can be no doubt of it; and all the copper ore sold in the former working (above 12,000*l.* worth) averaged above 7*l.* per ton, being considerably better than the average of the whole county.

MARKE VALLEY.—The lode is looking well in the 80 fm. level; in the crosscut, driving south on a cross-course, or caunter, a branch of ore having been met with, which holds out good promise. In the 65 fm. level, driving east, the lode produces some good stones of ore, accompanied by fluor-spar and mundic, which is considered highly favourable in this locality. The pitches, also, have much improved since the last report, one of them yielding 4 tons a fm.

WHEAL BALL.—Having seen in your Journal of the 10th ult., a brief account of a meeting of the adventurers of this mine, held on the 31st of March last, I beg to transmit to you a further statement respecting her. There was, as you reported, a dividend declared of 2*l.* per 60th share: leaving a balance of 70*l.* in the purser's hands, and 200*l.* worth of tinstuff on grass; and it was resolved, that the mine should be divided into 120 shares. This mine is situated in the parish of St. Just, in Penwith, in the county of Cornwall, and about a mile from Botallack, adjoining the Levant Mine, and in the best mining district in the county. In driving the 35 fm. level east, on a good regular course of tin, they cut a lode 12 ft. wide, of very rich work (every 14 gallons of which is worth 20*s.*), on which they are sinking—it appears to be improving going down. The 45 fm. level is driving east by four men on a course of tin, and within 10 fms. of being under this large lode in the bottom of the 35—the backs of which is set on tribute. This is an old mine, no man living remembers her having been worked before; the present adventurers have been working her about three years, and have been out only 660*l.* from the commencement. In clearing the old men's works, they discovered pieces of ground on the backs of the levels, from whence they rose tin enough to pay the cost, within the above sum; when they open a little more ground, they will have a great many tribute pitches to set. This is also a very extensive sett, full a mile in length, on the course of Wheal Ball lode—there are 11 other tin lodes, running parallel with Wheal Ball, nearly east and west in the same sett, all within 350 fms. north and south of Wheal Ball lode—through which runs two cross lodes north and south, called guides, about 240 fms. distant from each other, on which the old men drove, and sighted all the lodes mentioned, and it is supposed rose a great quantity of tin therefrom. It is the intention of the shareholders to clear all these levels and shafts, which will employ hundreds of men; and I do not hesitate in saying, that this is the best tin sett in the county of Cornwall. I visited the mine a few days prior to the meeting, and inspected her underground, and from what I saw, I feel satisfied that she will make an extraordinary good mine. They will be in a position to make a good dividend at the next general quarterly meeting, which will take place the latter part of June next, which will be the third dividend they have made; however, my advice to them is, to stock a sum of money, to the amount of 2000*l.*, to meet the necessary expenses of throwing open the mine to the full extent of the sett; when such is done there is not the slightest doubt but that she will give such dividends as has been but seldom heard of. Some of these lodes will intersect Wheal Ball lode in the eastern part of the sett, and will unite about 80 fms. deep; Wheal Ball lode underlays south about 2½ ft. per fm.; Wheal Several, Wheal London, and Wheal Game, are perpendicular lodes, south of Wheal Ball.

SALES OF SHARES BY AUCTION.—At a sale by Mr. G. Carne, at the Royal Hotel, Plymouth, on Tuesday last, the 27th ult., of shares in mining, railway, and other public companies, the following prices were obtained—viz.: Wheal Brewer, per share, 3*l.* 5*s.*; Devon and Courtenay Consols, 2*l.* 10*s.*; Tavy Consols, 3*l.* 10*s.*; George and Charlotte, 25*s.*; Caradon Consols, 3*l.* 17*s.* 6*d.*; Caradon Wheal Hooper, 5*l.*; Wheal Sisters, 30*l.*; Wheal Mary Consols, 6*l.* 10*s.*; Wheal Franco, 33*l.*; North Wheal Robert, 4*l.*; Wheal Anderton, 33*l.*; Devon and Cornwall Banking Company, 37*l.*; Devonport Gas and Coke Company, 5*l.* 5*s.*; and Plymouth and Stonehouse Gas and Coke Company, 9*l.* 5*s.*

The Finance Department of Norway has announced the approaching sale of 19,700 marcs of fine silver, the produce of the mines of Konigsberg—to be sold either in blocks, or in less quantities, according to offers made. The silver is in ingots, similar to those generally found in commerce, and packed in cases containing one to two ingots, of the weight of 80 to 150 ounces each.

CORNISH MINERS IN AUSTRALIA.—The party of miners from Cornwall, per *Britannia* and *Hooghly*, under Capt. Rodda, started on Monday from town, for the Barossa Range, to commence operations on the lands of G. F. Angas, Esq. We understand the quiet conduct of this little band, has been particularly noticed by persons in the neighbourhood of Grenfell-street, wherein they took up their temporary abode.—*Register:* Nov. 4.

A FINE MINERALOGICAL SPECIMEN.—There was taken up from the Wheal Trenance Mine, Mullion, on Saturday last, a stone of malleable red oxide and Chrysocollo copper that weighed 375 lbs.

LLYNVI VALLEY—THE GARTH WORKS.—These new iron-works were "blown in" on Easter Monday, when a deputation attended from the company, consisting of Messrs. Bailey, W. and R. Malins, G. and C. Rawlinson, Dr. Spurgin, &c., accompanied by Mrs. R. Malins, Miss Rawlinson, and several other ladies. The works are conducted on an entirely new principle, and the proceedings connected with the ceremony of "blowing in" are thus described by a correspondent of the *Silurian*:—About 4 P.M., the hour appointed for commencing operations, the engineer (Mr. Stanton) received the signal to set the machinery in motion; the ponderous moving beams, alternately and majestically

"Upheaved their vastness,"

and, in a moment, the whole was in active operation; whilst the ladies, whose names I have already given, in accordance with arrangements previously made, were escorted to the immediate vicinity of the furnaces—for on them was conferred the honour of directing, or putting on, the first blast of the engine—a task which they performed with an alacrity, accompanied by that presence of mind and firmness of nerve, which called forth the admiration of all present. The attention of the party was next directed to the very ingeniously constructed hydraulic apparatus, intended for the conveyance of the different materials to the tops of the furnaces, by which the necessity for erecting backwalls has been altogether superseded. The whole party, including the ladies, stepped on the platform, and, in a moment or two, were safely conveyed to the terminus of this semi-aerial machine. The lift, as it is termed, is capable of making 30 trips per hour, taking four tons of material each trip, and supplying the furnaces, three in number—admitting that such a quantity should be required—with 120 tons within the time I have stated, or *fourteen hundred and forty tons per day*; the whole being under the control of a man at the break, who commands the speed with the same ease as though he handled a walking stick. I observed as many as 30 persons at a time ascend and descend in perfect safety, the platforms being suspended by two of the company's patent galvanised wire rope. The machinery was examined in detail by the gentlemen composing the deputation, who expressed their astonishment at the contrivance; and passed, at the same time, a high eulogium on the inventor, Mr. L. Williams, the company's mining engineer and surveyor, on the successful termination of his labours in this instance. Mr. Williams has been for some years in the employ of the Cefn Cwse and Garth Company, and, in addition to his extensive practical knowledge as a mineral surveyor, is possessed of a large share of mechanical skill, of which the above affords sufficient evidence, and deserves to be noticed as another instance, added to the comparatively few on record, of the genuine native talent (with reference to the mechanical arts) of some, at least, of our fellow-countrymen.—*Cambrian.*

ABERDARE VALLEY.—The vast mineral resources of this valley are being developed more and more continually; and as works progress, and we have opportunities for observation, we cannot but be forcibly struck with the great changes which have taken place in the neighbourhood within the last 20 years; and the further extension of these results may reasonably be hoped for in future. Much has been done; but, compared with what remains to be accomplished, and with what, by the judicious application of capital and industry, can easily be effected, the exertions of the past are insignificant. Two new collieries have recently been fully opened. On Wednesday, the 7th inst., 50 tons of coal from Gadlys Colliery went down the Aberdare Railway, being the first quantity sent from that pit; and, on the same day, 25 tons of coal were sent down the same railway from Mr. D. Williams's colliery, at Ynisycynon. As time advances, and the demand for coal increases, other resources will be made manifest, and no difficulty will be found in meeting the requirements of the public.—*Merthyr Guardian.*

PERRANZABULOE SILVER-LEAD MINE COMPANY.—A company is just formed for working this mine, which was formerly known as Wheal Golden, and suspended some 20 years since; she had up to that time, according to the statements of many respectable old miners, who knew her well, yielded immense quantities of ore, averaging about 72 per cent. for lead, and 24 ozs. of silver to the ton. When suspended, it was evidently not intended to abandon the mine, as all the pitwork, with 14-in. lifts, flat-rods underground, &c., have all been left to the present day, and are available to the new company. The work already prosecuted, in addition to these advantages, is estimated at 18,000*l.*, and the present proprietors are willing to accept 500*l.* for their interest, while there is actually that amount of property at surface; they will also take 100 shares, and pay upon them equally with the other adventurers. It is confidently expected that 5000*l.* will be ample to get the mine into complete operation, payable in calls of 50*s.* each, at intervals of not less than three months.

THE ALBERT ADVENTURE.—This is a mining property, situated half a mile north-east of Alfred Consols, in the parish of Gwinear, measuring three-quarters of a mile on the course of the lodes from east to west, and one-third of a mile from north to south. Already there has been an adit brought up to about the middle of the sett, a shaft has been sunk 18 fms., and several cross-cuts driven to a considerable extent, which may be considered as a valuable bonus to the new adventurers; these have been cleared, a horse-whim erected over the shaft, and eight men are prosecuting the underground works, while two men are costeaning, and have already made some favourable discoveries. A good feature in this sett is, that the north lodes dip south, and the south dip north, and, in taking the direction of them from the western boundary, they indicate a junction eastward, as well as in depth. Capt. Paul (of Tincroft) has inspected the mine, and, although but one lode is yet opened upon, he considers that alone would justify the erection of an engine, and the spirited prosecution of the undertaking. The mine is divided into 1000 shares; and, though 5000*l.* is considered necessary fully to develope its resources, it is confidently expected that returns will furnish a large portion of that sum.

TRIBUTE TO SCIENCE.—We have just been informed, that the dignity of knighthood has been conferred on Mr. (now Sir William) Snow Harris—a gentleman whose name is familiar to our readers, from his successful scientific studies and valuable discoveries.

REID'S IMPROVEMENTS IN THE MANUFACTURE OF ELECTRO-TELEGRAPHIC WIRE.

[Patent dated October 29, 1846. Specification enrolled April 29, 1847.]

The introduction of the electric telegraph has rendered it an object of greater importance than it ever was before, to obtain wire of great lengths, and of an equal diameter and quality throughout. When Messrs. Cooke and Wheatstone first began their operations, the ordinary weight of iron-wire bundles, averaging about 192 ft. in length, did not exceed 14 lbs.; and it must have taken, therefore, more than 27 such bundles for each mile of telegraph, involving as many risks of failure as there were bundles; for the bundles had to be welded together at the ends, and the united wires were almost always not only thicker at the welds or joints than elsewhere, but more brittle, and very often unsound. By the invention, which is the subject of the present patent, wire can be manufactured in bundles of upwards of 100 lbs., or, indeed, of any required weight and length. It consists, so far, in simply welding together (end to end scarf-wise) the rods of iron before they are drawn into wire, and then passing them through the drawing machine, whereby the whole is not only produced of one uniform diameter, but any defects in the welding are instantly detected (through the strain required by the drawing process.)

Another valuable portion of this invention consists in an improved mode of preparing the wire for being coated with zinc, to protect it from oxidation, or, as it is commonly termed, being galvanized. Hitherto it has been the practice to cleanse the wire by immersing it, or otherwise subjecting it to the action of sulphuric acid, or nitric acid; and it has been often much injured in structure from the acid not acting equally on all parts of the wire alike, or from some parts being longer exposed to its action than others. Mr. Reid dispenses with the use of acid altogether, and effects the cleansing wholly by mechanical friction. By an ingenious system of machinery, which is described at length in his specification, he cleanses from 6 to 12 lines of wire at a time, and not only with immense rapidity, but with a degree of perfection wholly unattainable by the acid process.—*Mechanics' Magazine.*

RAILWAY JURISPRUDENCE IN FRANCE, FOR NON-FULFILMENT OF CONTRACTS OF MACHINERY.—The decision of the Tribunal de Commerce, in the case of Messrs. Schneider and Co., the celebrated locomotive, steam-engine, and ironfounders of Creuzot, has created a great sensation among the ironmasters and founders throughout France, as they must now for the future be cautious as to the contracts they enter into with railway companies, or steam navigation companies, for the delivery of machinery, &c. We have before alluded to this case, and the non-fulfilment of contracts generally by the iron and engine establishments in France, in consequence of their incompetency to accomplish their engagements, notwithstanding the protection given by the Minister of Commerce. By a contract, entered into on the 19th November, 1845, Messrs. Schneider, the directors of the Iron Company of Creuzot, bound themselves to deliver to the Northern Railway Company, at their terminus at Paris, 10 locomotives, as follows: two on the 10th June, 1846; two on the 10th July; two on the 10th August; two on the 10th September; and two on the 10th November. It was stipulated that Messrs. Schneider should pay to the Northern Company 100 fr. (4*l.*) for each day's delay in the delivery of each locomotive. Not any of these locomotives having as yet been delivered, the Northern Company commenced an action for damages and non-fulfilment of contract, before the Tribunal of Commerce, against Messrs. Schneider, for the sum of 154,200 fr. (6168*l.*), in payment of the days of delay from the time agreed upon, up to the 1st of March last, deducting 20 days' delay, which they themselves had incurred in sending in the plans of the engines, &c. Messrs. Schneider, against this demand, put in the plea, that the delays had been caused by the railway company not having sent in due time their plans, but that, at all events, the damages and interest could only become due from the day they received them. The Tribunal, after hearing the arguments of Mr. Walker, the counsel, on the part of the Company, and M. Lan, the representative of Messrs. Schneider, condemned the latter to pay the Northern Company the sum of 93,900 fr. (3756*l.*) for the delay in the non-delivery of the locomotives up to the 1st March last, and 4*l.* for every day's delay of each locomotive since that date, until they are all delivered. The *Journal des Chemins de Fer* makes the following pithy remark:—"Here is a fresh proof of the inability of the forgemasters to fulfil their engagements. If the Government had allowed the Atmospheric Railway Company of St. Germain (opened a week ago, after having been delayed for nearly a year-and-a-half by the same parties), to have obtained their engines and tubes in England at more than one-third less, perhaps, the Cruezot Company would not have undergone this law-suit, and sentenced to pay a heavy fine, with interest, to the Northern Company. Unfortunately, the directors of our iron factories want to do everything, and undertake everything; much better would it be if the Government would allow the railway companies to provide themselves, temporarily from abroad, for a portion of their rails, chairs, and *materiel*, as it would be advantageous to all." It appears, that several barges arrived on Saturday last, in the Canal of St. Martin, at Paris, with six locomotives, from the Cruezot Foundry, for the Northern Railway—being the first boats which have been able to come from the interior since October last, as the canal of the centre in which the factory is situated, had been broken up, in consequence of the inundations of the Loire. The hard frosts, and floating of icebergs down the Seine, and stoppage of all the canals in the interior, had prevented the free navigation.

Experiments with the atmospheric on the South Devon are constantly going on, and the results are pronounced satisfactory. The atmospheric accomplishes in 11 minutes, what the locomotive does in 20; but the locomotive has the best of it in weight. It is now decided to open the line to Newton, for goods' traffic, on Saturday, the 1st of May, and to delay the opening to Totnes until the 1st of June. The cause of this delay has arisen from the contractor between Newton and Dainton failing the specified time, his excuse being the numerous springs in the cuttings, and the widening the embankment on Hemston marsh.

THE GAUGE CONTEST IN CHANCERY.—The cost of the law proceedings in Chancery exceeded 3000*l.*: above two-thirds of which will fall on the plaintiffs.

The Great Western Railway are about to launch a novelty in dynamics—a new eight-wheeled engine, built by Mr. Brunel and Mr. Gooch—she is to be called the *Iron Duke*, and to be first run on the Duke of Wellington's birth-day.

NORTHERN COUNTIES UNION RAILWAY.—A correspondent informs us that the Wath and Tebay contracts have been well let, under the engineers' estimate,—the tender for the Wath contracts amounts to little more than 5000*l.* The works will be commenced without delay, as active operations are in progress for this purpose.

LONDON, BRIGHTON, AND SOUTH COAST RAILWAY—THE EPSOM LINE.—The Epsom line is to be inspected by the Government officer on Thursday next, and will certainly be open for the Derby day. The number and arrangement of trains for the races are as yet unsettled.—*Railway Record.*

MANCHESTER AND SOUTHAMPTON RAILWAY.—The Manchester and Southampton bill is before the examiner on Standing Orders, and many objections have been sustained. Strong fears for its safety are entertained—inasmuch, as only a certain principle of correction was allowed by the Committee.—*Ibid.*

The opening of the section of the railway from Cologne to Minden, between Duisberg and Hanny, will take place on the 1st of May (this day).

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual. 46

TO MINE AGENTS, MINE SURVEYORS, &c.—W. WILTON,
MATHEMATICAL, PHILOSOPHICAL, AND OPTICAL INSTRUMENT MAKER,
ST. DAY, CORNWALL,
Begs to call the attention of MINE AGENTS and SURVEYORS to his MINER'S THEODOLITE, and other IMPROVED INSTRUMENTS, adapted to MINE SURVEYING; and to assure them, that, from many years' constant application of his energies in one of the most active mining districts to this particular branch of mathematical instrument making, he flatters himself he is able to furnish instruments, equal in point of accuracy and workmanship, and superior as regards adaptation to the wants of the miner, to those supplied by almost any other house.
*** A descriptive price list sent free per post, on application. 47

BRUNTON'S PATENT ORE-DRESSING FRAME.—These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Bolitho and Sons; P. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kernick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Grey; Capt. James Miners, and Capt. Matthew Rogers, Carn Brea Mines. 48

This day is published,
THE ANCIENT WORLD; or, Picturesque Sketches of Creation.—By D. T. ANSTED, M.A., F.R.S., F.G.S., &c. &c.; Professor of Geology in King's College, London. Post 8 vo., with 149 Illustrations, 12*s.*
John Van Voorst, 1, Paternoster-row. 49

Just published,
THE BANK OF ENGLAND JUSTIFIED IN THEIR PRESENT COURSE.
BY JAMES WARD, Esq.,
Author of "How to Re-construct the Industrial Condition of Ireland,"—"Railways for the Many and Not for the Few," &c.
London: Smith, Elder, and Co., 65, Cornhill. 50

Just published, Part I.,
COMBUSTION of COAL, CHEMICALLY & PRACTICALLY CONSIDERED. With coloured plates.
By CHARLES WYE WILLIAMS, Esq. 51
London: Simpkin, Marshall, & Co., and J. Weale—*Birmingham:* Wrightson & Webb.

ELECTRIC TELEGRAPHS.—As the INVENTORS and PATENTEES of the ELECTRO-TELEGRAPHIC CONVERSER, the principle of which is far more simple, certain, and perfect than any at present known to the world, we feel justified in asking all BRITISH and FOREIGN RAILWAY COMPANIES, as well as the various FOREIGN GOVERNMENTS requiring these important instruments, to PAUSE before they ADOPT any PARTICULAR TELEGRAPH, until our patent arrangements are complete; when an inspection of OUR TELEGRAPH will convince them of its superiority, being perfectly free from vibration, and not liable to derangement by atmospheric or other influences; and may be worked by a single wire, through any number of instruments, on any length of line. BRETT & LITTLE 52
140, Holborn-bars, London.

ELECTRO-MAGNETIC TELEGRAPH—NOTT'S PATENT.
PATRONISED by H. R. H. PRINCE ALBERT, the LORDS OF THE ADMIRALTY, &c.
The proprietors of Nott's Patent beg to inform all RAILWAY COMPANIES, that they are ready to TREAT with them for the ERECTION of the TELEGRAPH, on any length of railway, on the most reasonable terms. This instrument, from its simplicity of construction and certainty of action, is, after the most severe test, proved to be the most useful and efficient instrument of the kind ever yet invented, as reported on by Dr. Faraday, Capt. Brandreth, Professor Brande, Dr. Bachhoffner, &c., and, in fact, all the science of the country.
It may be seen in daily operation on the London and North-Western Railway, where it is in practical use, between Blisworth and Northampton stations; also, at the Telegraph Office, 2, Royal Exchange-buildings, where all particulars may be obtained, and the Report seen. 53

IMPORTANT TO RAILWAY COMPANIES.
PATENT KAMPTULICON COMPANY, 18, CORNHILL.
This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.
By order of the board, P. G. GREVILLE, Secretary. 54

NORTH WALES MINING COMPANY.—COUNTY OF MERIONETH.
Divided into 12,500 shares—limited to 10*l.* each, and carried out upon the Cost-book System, with a deposit of 2*l.* 10*s.* per share. 55
OFFICES—No. 2, NEW BROAD-STREET, LONDON.

The company will be carried on under the system known in Cornwall as the "Cost-book System," whereby the shareholders have the peculiar advantage of determining at any time their liability by a relinquishment of their shares; and by a clause in the Cost-book, no further call beyond the 2*l.* 10*s.* will be made until after a dividend is declared out of the profits of the undertaking.
The public is requested to seek information at the offices of the company, No. 2, New Broad-street, London, where specimens of the ores, and original assays by some of the principal assayers of the present day, as well as the manuscript reports of Captains Kitto, Matthew Francis, and Wm. Williams, may be inspected.
Applications for prospectuses, copies of the reports, and shares, to be made to the purser, at the company's offices; the solicitors, W. W. Fisher, Esq., 3, King-street, Cheapside, London, and Messrs. Owen and Griffiths, Dolgelly, Merioneth; and the following brokers and agents:—Mr. B. Rankin, 23, Tokenhouse-yard; Messrs. Watson and Cuell, 1, St. Michael's-alley, Cornhill; and Mr. C. W. De Bernardy, 45, Leicester-square, London; Messrs. Thomas Cardwell and Sons, and Mr. J. Ferneyhough, Manchester; Mr. P. Kempson, Birmingham; Mr. C. S. Edsall, Truro; Mr. James Cunninghame, jun., Bristol; Capt. W. Williams, near Crowan, Cornwall; Messrs. C. Weitbelorcd and Co., Leeds; Mr. Thos. A. Marten, Swansea.—Copies of the Prospectus can also be had at the office of Mr. Henry English, mining engineer, 26, Fleet-street; and at the *Mining Journal* Office, 26, Fleet-street, London. W. T. GRIFFITHS, Purser.

UNITED KINGDOM ARTESIAN WATER COMPANY,
Capital £500,000, in 50,000 shares, of £10 each.—Deposit 7*s.* 6*d.* per share.
Provisionally Registered, pursuant to 7 and 8 Vic., cap. 110; and Notices, Specifications, &c., for an Act of Incorporation, served on the Woods, Forests, and Land Revenues, *Pursuant to 9 and 10 Vic., cap. 106.*
PATRONS.
The Most Noble the Marquis of NORTHAMPTON, Belgrave-square.
The Right Hon. Lord ASHLEY, Upper Brook-street, Grosvenor-square. 56
TRUSTEES.
Lord CHARLES BEAUCLERC, Lowndes-street, Lowndes-square
WILLIAM ALEX. M'KINNON, Esq., M.P., Leamington, and Hyde-park-place.
BENJAMIN BOND CABBELL, Esq., M.P., St. Alban's, and Portland-place.
LUKE JAMES HANSARD, Esq., Southampton-street, Bloomsbury-square
MANAGING DIRECTORS.
JOHN BOND, Esq., M.D., M.R.C.S., L. and E., George-street, Portman-square.
Capt. EDWARD SMITH, R.N., 10, John-street, Adelphi.
G. BARRY, Esq., M.D., M.R.C.S., L., Charles-street, St. James's-square.
JOSHUA STOPFORD, Esq., East India Chambers, City.
CHARLES BLUNT, Esq., Montagu-place, Russell-square.
WILLIAM HENRY MAYNE, Esq., M.D., M.R.C.S., L., Howland-st., Fitzroy-square.
ELLIS PRICE SUTTON, Esq., Great Ormond-street.
(With power to add to their number.)
BANKERS.
London Joint-Stock Bank, Princes-street, Bank; Commercial Bank, Lothbury.
SECRETARY—Joshua Stopford.
ASSISTANT SECRETARY—William St. George Graham.
21, East India Chambers, Leadenhall-street.

PROSPECTUS.
When we look to the vast population, and consider the eminence, the trade, the enterprise, the great manufacturing and commercial interests of this metropolis, it becomes a matter of no little surprise that the most active means have not, long since, been taken to obtain a better supply of water, and to get rid of the mud and water monopoly which has so grievously existed for many years past.
The subject is one upon which so much has been said, and such universal complaints made, that it is altogether unnecessary to dilate upon the crying evil, or to offer a single remark beyond that which is rendered so self-evident to every disinterested and dispassionate mind.
Of the eight companies supplying London with water, the New River is the most extensive. It was constructed by Sir Hugh Myddleton, at an expense of about £150,000*l.* When, in 1843, the public were much excited in consequence of the bad water supplied, a Parliamentary Inquiry on the subject took place, and Commissioners were appointed. From the evidence then given, it appeared that the capital invested by the New River Company was £1,116,964, by the other companies £3,127,595, making a total of £3,224,559. Although the New River Company paid an enormous bonus (300 per cent. on the paid-up capital) yearly to the shareholders, there was a balance of £157,236 10*s.* 6*d.* remaining, which is more than the original cost of construction. The average number of houses supplied in 1834, according to the minutes of the evidence, was 196,492, at the annual value of £276,200, about £1 10*s.* yearly per house. Pure water can be supplied for one-third that sum, and leave a profit to the capitalist, who invests in this speculation, more enormous than that of the New River Company.
Hence the opportunity has presented itself for the formation of a company for the supply of pure water at an inconsiderable outlay, and upon those sure and unerring principles of artesian springs, which have been so generally adopted on the continent—unfailing and successfully established to the satisfaction of the most sceptical individuals.
So certain and conclusive have been the experiments tried, that the most successful result has attended every instance in procuring water upon the principle stated.
All applications for shares must be addressed to the secretary of the United Kingdom Artesian Water Company, at the offices, East India-chambers, Leadenhall-street, City London; and to the following brokers:—Messrs. Lamond, Smale, and Lamond, Threadneedle-street; J. T. Berkeley, Esq., 18, Threadneedle-street; W. H. Collis, Esq., Birmingham; Messrs. A. Moffat and Co., York-place, Edinburgh; A. Mercer, Esq., Perth; T. S. Ferneyhough, Esq., Manchester; Messrs. Powell and Lownds, Liverpool; Messrs. Warburton and Crossland, Sheffield; T. S. Holland, Coventry; Messrs. Kirk and Co., Leeds; Messrs. Campbell, Dublin; Messrs. Tugg and Hodgson, Hull; F. Dixon, Esq., and Messrs. H. and W. A. Tassie, Glasgow.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 189 91
3 per Cent. Reduced Ann., 86⅞ 6
3 per Cent. Consols Ann., 86⅛ 7⅛
3 per Cent. Annuities, —
3½ per Cent. Ann., 97⅛ ⅝ 7⅛
Long Annuities, 9 ⅛
India Stock, 10½ per Cent., 244 3
3 per Cent. Consols for Acc., 86⅛ ⅞
Exchequer Bills, 1000*l.* 2d., 5 6 dis. par
Belgian Bonds, 4½ per Cent., 94⅝
Dutch, 2½ per Cent., 58⅛ ⅝
Brazilian, 5 per Cents., 85
Chilian, 6 per Cents., 91
Mexican, 5 per Cents., 19⅛ 20
Spanish, 5 per Cents., 24⅛
Ditto 3 per Cents., 35⅛
Portuguese, 4 per Cents., 34⅝ 4
Russian, 5 per Cents., 109⅛ 10 ⅛

MINES.—The mining share market has been very heavy, and but little business transacted during the week, and that which has been done at lower figures generally. There has been an inquiry for North Pool, South Wheal Francis, East Wheal Rose, Herodscombe, Kirkcudbright, and Wheal Franco; but the prices offered have been generally lower than our present quotations—consequently, there has not been any business transacted, excepting in the latter three mines, in which an advance has taken place, with every appearance of a continuance, the reports from these mines being of the most encouraging character. East Wheal Rose account meeting was held on the 23d ult., when a dividend of 40*l.* per 128th share was declared, leaving a balance of 2702*l.* 8s. 5d. in hand; the proceeds of the four sales of lead ore amounted to 13,328*l.* 18s. 3d. The directors of Wheal Maria, at their two-monthly meeting of last Thursday, declared a dividend of 5*l.* per 1024th.

Shares in the following mines have changed hands during the week—viz.: Trelawney, Birch Tor, Franco, Stray Park, Caradon Wheal Hooper, Cleveland, Condurrow, West Alfred, Mary Ann. Heigneton Down, Kirkcudbright, Herodscombe, Tamar, Trethellian, United Hills, West Wheal Treasury, Treleigh, Wheal Blencowe, &c. In the foreign shares, Australians, Kinzigthal, and Asturians, appear to have been the most marketable; in the two former a considerable fall has taken place since our last. Real del Montes and the loan notes have been inquired for, and some business done.

RAILWAYS.—The pressure on the discount market appeared, in the early part of the week, to have a severe effect on the share market, and selling orders from the country increased considerably; great caution was, however, evident in making bargains, and little business was done—in fact, it had not, in the slightest degree, recovered from the depression of the previous week; and, when sales were attempted, the greatest difficulty was found in transacting any business. On Wednesday, somewhat of a reaction took place, the market opened with a better feeling, prices were maintained more firmly, and some scarcity was experienced in the quantity of stock inquired after; the funds, however, declined in the afternoon, and, with them, the share market became again depressed; there were, however, fewer sales pressed throughout the week than could be supposed from the state of the market. Yesterday, there appeared to be a little better feeling, and some improvements took place, no doubt caused by the rise in the public funds.

MEETINGS.—*Lancaster and Preston Junction Railway:* the following resolution was passed:—The East Lancashire Railway Company to take a lease of the property of the Lancaster and Preston Company in perpetuity, at an annual rent of 29,000*l.*, and to assume all the debts and liabilities of the Lancaster and Preston Company. The rent to commence as from the 30th June next, to be paid half-yearly, in February and August. The sum of about 5000*l.* in the hands of the company, to be retained by the Lancaster and Preston Company. The East Lancashire Company to redeem the rent of 29,000*l.*, at 25 years purchase, within 10 years.—*Vale of Neath:* special meeting; to approve, or otherwise, of the bill now before Parliament, to enable the company to construct certain new lines, in connection with their line; the capital to be raised under this bill is 45,000*l.* Five per cent. is hereafter to be alowed on payment of calls, and it appeared that 36,000*l.* out of 55,000*l.*, the last call, had already been paid, although only due a fortnight.

At Messrs. Lamond's sales on Tuesday, prices had declined, but buyers were decidedly more willing to invest in the better description of stock. On Friday prices, in some degree, participated in the rise of the funds, and buyers had more confidence.

SALE OF HUNGERFORD-BRIDGE.—The committee appointed for conducting the sale of this property to Messrs. Jackson, Reed, Fuller, and others, were summoned to meet yesterday, at half-past 12, at No. 17 Committee-room, House of Commons, but there being only Lord Barrington and Colonel Sibthorpe present, they adjourned to Tuesday next.

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2130 miles of railway, was 161,735*l.*, thus accounted for:—84,223*l.* for the conveyance of passengers only, 42,080*l.* for the carriage of goods, and a remainder of 35,432*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 27,748*l.*, when the mileage was about 1,990.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1847	1846
Arbroath and Forfar	15	£142,900	3*p.c.*	£206 4 8	164
Chester and Birkenhead	15	658,293	2¼	703 10 9	£549
Dublin and Drogheda	35	689,248	3½	739 5 2	730
Dublin and Kingstown	6	349,736	9	961 11 8	1064
Dundee and Arbroath	16½	156,323	6	311 2 5½	277
East Lancashire	28	814,417	—	728 12 5	—
Eastern Counties	184½	6,513,026	7	10417 9 0	8277
Eastern Union	17	227,253	—	526 0 0	—
Edinburgh and Glasgow	46	2,112,136	6	3665 12 9	3317
Glasgow, Paisley, and Ayr	53	1,567,281	7	2253 0 5	1977
Glasgow, Paisley, & Greenock	23	835,918	2	1098 14 8	876
Great Southern and Western	86½	1,343,718	—	1588 13 4	—
Great Western	241	9,714,939	8	19286 19 5	20101
Ipswich and Bury	26½	303,768	—	427 0 0	—
London and North Western	378½	18,042,004	10	4041 18 4	39904
London and Blackwall	4	1,102,717	1½	960 7 7	826
London, Brighton, & South Coast	112	5,109,667	7	6805 2 10	4552
London and South-Western	127	4,278,789	9	7474 10 5	7010
Manchester & Leeds	117½	5,036,391	5½	7985 13 6	6302
Manchester, Sheffield, & Lincolnsh.	49½	1,678,108	5	1894 0 8	1584
Midland Company	329½	7,862,274	7	19500 16 11	15905
Newcastle and Berwick	9	1,184,079	5	723 7 2	—
Newcastle and Carlisle	65	1,184,080	5	2337 0 5	1857
Norfolk	70½	1,199,689	7	1643 3 4	1204
North British	72½	1,459,956	—	1683 9 9	—
Preston and Wyre	30	432,014	2½	629 0 0	607
Shrewsbury and Chester	15	354,945	—	402 12 4	—
South Devon	20	1,061,283	5	542 2 9½	—
South-Eastern	140½	5,888,411	3½	7320 11 9	6831
Taff Vale	30½	888,411	6½	1584 9 1	1108
Ulster	25	358,353	5½	1000 2 7	648
York and Newcastle	183½	1,712,317	9	7734 18 3	6684
York and North Midland	162½	2,483,256	10	5931 6 1	5176

CORNISH STEAM-ENGINES.

The number of pumping-engines reported for the month of March is 25—the quantity of coals consumed being 2093 tons, lifting, in the aggregate, 20,000,000 tons of water 10 fathoms high—the average duty of the whole is, therefore, 54,000,000 lbs. lifted 1 foot high by the consumption of a bushel of coal. The following have exceeded the average:—

Mines.	Engines.	Length of stroke	Load in pounds.	Load per sq. inch. on plat.	Strokes per min.	Consump. of coal in bus.	Million lbs. lifted 1 foot by consump. of 1 bush. coal	Average quantity of water per min.
Wh. Prosper	Western, 80 in.	9·7	94,375	14·8	6·5	3528	54·4	1333
Ditto	Roberts's 70-in.	9·75	80,122	16·1	5·5	2496	55·1	
Great Work	Leeds's 60-inch	9·0	47,090	12·9	8·5	2142	54·8	202
North Roskear	New 70-inch.	10·33	84,532	12·6	3·6	1896	53·2	203
Poldice	Sims's 85-in.	10·0	75,465	9·3	8·8	3544	55·1	624
Ting-Tang	Sims's 60,100 in. combined	9·0	55,514	18·8	5·1	1584	58·3	329
United Mines	Taylor's 85-in.	11·0	97,108	13·5	6·9	3346	84·4	—
Ditto	Eldon's 30-inch	9·0	13,631	16·0	8·9	544	70·0	—
Ditto	Hocking's 85-in	10·0	100,358	14·8	6·9	4388	55·9	—
East Wh. Rose	Penrose's 70 in.	10·0	50,691	11·8	3·5	1098	59·3	682
Ditto	Michell's 70 in.	10·0	55,199	12·9	5·2	1705	61·7	

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Dipton Tanfield 14 6—Holywell Main 16 9—New Tanfield 15 6—Original Tanfield 14 6—Tanfield Moor 16 9—Wall's End Northumberland 16 6—Haswell 19 9—Hetton 19 6—Hudson's Hartlepool 18—Adelaide Tees 18 6—St. Helen's Tees 16 9—Seymour Tees 18—South Durham 16 9—Tees 19 3 to 19 6—Cowpen Hartley 18 3—Sidney's Hartley 18 3.—Ships at market, 20.

WEDNESDAY.—Adelaide Tees 20—Tees 20—Llangennech 22 6.—Ships at market 42; sold, 12.

FRIDAY.—Bates's West Hartley 17 9—North Percy Hartley 17 9—Wall's End Hilda 18—Braddyll's Hetton 20—Hetton 20—Lambton 20—Russell's Hetton 20—High Thornley 17 9—Eden Main 19 3—South Kelloe 19 9 to 20—Tees 20—Sidney's Hartley 18 9.—Ships at market, 21.

NEW PATENTS.

A. V. Newton, 66, Chancery-lane, mechanical draughtsman, for improvements in the construction of roads or ways, and in the carriages to be used thereon.

T. Denne, Bermondsey, Surrey, strap manufacturer, for improvements in the manufacture of grease, or compositions for atmospheric pipes, and for lubricating the axles and moving parts of machinery.

R. Broad, Tipton, Stafford, engineer, for improvements in railway turn-tables.

R. A. Brooman, of the patent-office, 166, Fleet-street, patent agent, for certain improvements in railway turn-tables.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwesin	7	12
512	Albert Consols	1	2½
1024	Alfred Consols	4½	35
225	Andrew and Nangilles	28½	18
10000	Ayrshire Iron Company	2½	2½
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	2	—
1000	Barristown	4½	19
4000	Bedford	2½	3½
128	Before Lead Mine	14	10
315	Birch Tor Tin Mine	21½	10
8000	Blaenavon	50	40
100	Botallack	175	225
120	Brewer	5	7
10000	British Iron, New, regis.	10	17½
—	Ditto ditto, scrip	10	19
128	Budnick Consols	52½	40
128	Burthy	20	21
100	Bwich Cwmerfin	20	—
128	Callestock	17	50
1000	Callington	19	29
256	Caradon Consols	47	4
256	Caradon Copper Mine	9¼	1
256	Caradon Mines	22½	20
256	Caradon United	24	15
256	Caradon Wh. Hooper	20	4
1000	Carn Brea	15	100
2048	Carmarthen Consols	2	5
112	Charlestown	200	100
166	Cleveland	9	2½
1900	Combmartin	7½	4½
1000	Comblawn	⅜	1½
128	Comfort	45	80
256	Condurrow	20	19
2560	Cook's Kitchen	14	5½
1000	Copper Bottom	1	5
1024	Coulcen	4½	20
240	Craddock Moor	15½	15
128	Creeg Brawa	120	150
500	Cubert Mine	12	20
2048	Dartmoor Consols	2	2½
7100	Derwent	8½	5
1024	Devon&CourtenayCon.	5½	4
1000	Dhurode	2	5
186	Dolcoath	30	50
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
256	East Alvenney	3	10
112	East Caradon	40	40
2048	East Crowndale	4½	2½
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	20
100	East Relistian	22	40
9000	East Tamar Consols	1⅞	2½
—	East Wheal Albert	1	3
94	East Wheal Crofty	280	310
256	East Wheal Fortune	2	3
128	East Wheal Rose	50	1200
—	East of Scotland Iron Co.	2½	2½
123	East Wheal Seton	14	20
256	Exmoor Wh. Eliza	3½	10
512	Fowey Consols	40	45
20000	Galvanised Iron Co.	10	9⅝
10000	Gen. Mining Co. for Irel.	½	¼
2048	Georgia Tin Mines	1½	1½
1000	Godolphin	25	35
256	Gonamena	21	50
128	Goonvrea	4	½
244	Grambler & St. Aubyn	—	25
100	Great Consols	1000	400
256	Great Callestick Moors	22	25
2560	Great Michell Consols	1½	5
256	Great Resugga Moor	2	4
512	Gt. Wh. Rough Torr Con.	2	25
1500	Great South Tolgus	2	2
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	5	19
1000	Hanson	14	2
1000	Harrowbarrow Old Mine	6¼	3
800	Hawkmoor	3	2
6000	Heigneton Down Con.	¼	2½
256	Herodscombe	½	10½
256	Herodsfoot	14	12
10000	Hibernian	12½	1
—	Hobb's Hill	4	3
1000	Holmbush	18	14
256	Ivy Tor	1½	2½
827	Kirkcudbrightshire	4½	8½
2048	Lamlerooe Wh. Maria	9	4
74	Lanarth & Penstruthal	—	10
2048	Lanivet Consols	4	2
200	Larkholes	1	3
160	Levant	—	90
1000	Lewis	15	7
1280	Llancynfelin	6	10
1000	Llwyn Malees	5	—
3600	Llynvi Iron	50	60–65
256	Lostwithiel Consols	7	7
128	Ludcott	3	3
4000	Marke Valley	10	3½
5000	Mendip Hills	2	2
20000	Mining Co. of Ireland	7	8½
256	New East Crowndale	3½	3½
128	North Fowey Consols	25	20
100	North Pool	45	140
70	North Roskear	10½	350
512	North Treburget	2	3
100	North United	41	20
256	North Wh. Abraham	⅝	12
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	3½	7
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
2000	Pantdrainiog Slate Co.	2½	3
128	Par Consols	900	1000
1024	Pembroke	1½	6
256	Penhallow Moor	15	4
4000	Pennant	1	3
100	Penrhiw	30	65
256	Pentuan Wheal Mary	3½	6
128	Pen-y-Cefn Mine	50	35
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	65
512	Plymouth Wh. Yeoland	2½	6
2048	Prince Edward	1½	1½
112	Providence Mines	35	45
256	Redruth Consols	3	10
10000	Rhymney Iron	50	30
256	Rose Consols	10	6
1000	Rosewall Hill	1	5
—	Shotta Iron Company	50	70
2500	Silver Valley	4	2½
128	South Caradon	10	400–10
2000	South Dolcoath	2	2
256	Sth. Friendsh. Wh. Ann	14	14
200	South Harvannah	23	26
9000	South Tamar	½	¼
256	South Tolgus	2½	20

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
800	South Towan	10	1½
256	South Trelawney	15½	10
128	South Yeoland	16½	20
128	South Wheal Basset	110	80
124	South Wh. Francis	160	230
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2
256	South Wheal Rose	11½	1
10000	Southern&Western, Irish	2	4–5
256	St. Austell Consols	8	14
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	7
1000	Stray Park	43	37
9600	Tamar Consols	5	5
1024	Tavy Consols	4	3
6000	Tincroft	7	9
3000	Tin Vale Consols	½	1½
256	Ting Tang	15	9
128	Tokenbury	140	17½
256	Tolpetherwin	3½	3½
256	Trehane	2	22
8000	Treleigh Consols	6	4
256	Trenow Consols	30	25
96	Tresavean	10	200
120	Trethellan	5	27½
130	Treviskey and Barrier	130	180
256	Trewollack	20	20
128	Trewellard	12	26½
6000	United Hills	5	½
100	United Mines	300	500
256	Wellington Mines	15	30
128	West Basset	45	30
256	West Caradon	20	168
128	West Gargoll	2	12
512	West Fowey Consols	40	15
256	West Grambler	7	8
—	West Kekewich Consols	—	3
256	West Providence	9½	18½
200	West Seton	40	80
—	West of Scotland Iron Co.	155	169
120	West Trethellan	5	25
256	West United Hills	2¾	4
256	West Wh. Friendship	7½	4
3845	West Wheal Jewel	11	2½
2560	West Wh. Maria	1½	1
256	West Wheal Shepherd	5	21
256	West Wheal Tolgus	21½	3
256	West Wheal Treasury	19	20
5200	Wicklow Copper	5	15½
184	Wheal Adams	41	28
1000	Wheal Agar	—	8
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	1½	4
237	Wheal Anderton	16½	30
128	Wheal Ann	—	50½
128	Wheal Arvose	3½	4
1024	Wheal Ash	2½	12
120	Wheal Bail	5½	150
2560	Wheal Barbara	1½	1½
256	Wheal Benny	6½	4½
256	Wheal Blencowe	8	15
256	Wheal Bucketts	20	30
256	Wheal Byon Consols	½	½
256	Wheal Calstock	3	4
136	Wheal Clifford	190	190
1024	Wheal Concord	6½	2
128	Wheal Courtenay	—	20
6000	Wheal Curtis	1½	1
256	Wheal Dyke	12	13
512	Wheal Elizabeth	2½	3
256	Wheal Fortescue	5½	9½
512	Wheal Fortune Consols	3½	6½
2048	Wheal Frederick	2	2
388	Wheal Franco	27	35
256	Wheal Gill	19½	9
1024	Wheal Grace	2	2½
128	Wheal Harriet	45	50
2048	Wheal Holwell	1½	1½
256	Wheal Jane	11	25
256	Wheal Kekewich	4	4
256	Wheal Louisa	6½	11
112	Wheal Margaret	79	200
256	Wheal Maria (Hayle)	19	25
1024	Wheal Maria	1	350
4000	Wheal Martha Consols	5	2
512	Wheal Mary Ann	5	25
256	Wheal Mary Consols	34	25
256	Wheal Mary (Lanivet)	6½	4
256	Wheal Maude	1½	1½
128	Wheal Metha	23	92½
128	Wheal Pollard	12½	12
210	Wheal Prospect	4	7
128	Wheal Reeth	1	17
128	Wheal Rose	60	42
99	Wheal Seton	214	800
256	Wheal Sisters	27½	30
256	Wheal Sophia	3½	10
1024	Wheal Spearne	1½	8
128	Wheal St. Ann	9	15
260	Wheal Trelawney	7½	110
256	Wh. Tremaine(St. Ervan)	1½	20
256	Wheal Tremayne	35	50
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	150
128	Wheal Venland	12½	10
127	Wheal Virgin	50	60
256	Wheal Vlow (Perranz.)	⅝	⅝
188	Wheal Vyvvan	—	3
1024	Wheal Walter	4	2
256	Wheal Williams	2	18

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	4½
15000	Asturian Mining Co.	9	5½
20000	Australian	2	5½
10000	Anglo-Mexican Co.	100	1
12374	Ditto Subscription	25	2½
3000	Bolanos	150	6½
2000	Ditto Scrip	15	6
12000	Brazilian Imperial	20	2½
10000	Cobre Copper Co.	40	25½
8500	Colombian Co. regis.	55	41
8000	Ditto Scrip	5½	
5000	Copiapo Mining Co.	14	3½
10000	General Mining Ass'n.	20	15½
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	59	—
5000	Mocaubas & Cocaes	25	5½
29320	Rl. del Monte, regis.	28½	av. 3½
	Ditto unregistered		
	Ditto Red Debentures	—	16
	Ditto Black ditto	—	14
	Ditto Loan Notes	150	97½
7000	Royal Santiago	10	5
2000	Pachuca Mines	4	4½
11000	St. John del Rey	15	7½
43174	United Mexican	28½	3

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

SOUTH AUSTRALIAN SHARE MARKET.

Shares.	Company.	Paid.	Price.
2000	Adelaide	5	6
600	Barossa Range	4	24
2464	Burra Burra	5	90
436	Grand Junction	15	28
200	Greenock Creek	5	12
100000	Scottish Invest. Co.	1	1½

Shares.	Company.	Paid.	Price.
18	South Para	15	50
1000	Poonawurta	—	9½–10
400	Princess Royal	—	259
10000	Royal South Australian	—	55½
600	Victoria	2	2
500	Wakefield	2	2

SOUTH AUSTRALIA AND NEW ZEALAND.

100000	North British Australasian (Kaw-aw, &c.)	1	1½

JOINT-STOCK BANKS.

Companies.	Shares.	Paid.	Price.
Australasia	22,500	£40	£22
British North American	20,000	50	44½
London and Westminster	40,000	20	26½
London Joint-Stock	60,000	10	16
National of Ireland	20,000	22½	19½
Provincial of Ireland	20,000	25	44½
Union of Australia	20,000	25	23½
Union of London	60,000	10	12

DEATH OF MR. THOMAS JOPLIN.—Intelligence has been received of the death at Graefenberg, of Mr. T. Joplin, the founder of joint-stock banking, and who has for many years held a prominent position in the banking and mercantile world. He had gone to Graefenberg to try the effect of the celebrated water cure, but had for some months before his death relinquished it.

Messrs. Rennie and Co. have contracted with the committee of the Monmouthshire Canal Company for the making of a portion of this line. The works will be speedily commenced.

LATEST CURRENT PRICES OF METALS.

LONDON, APRIL 30, 1847.

	£ s.	£ s. d.		£ s.	£ s. d.
Iron—Bar a..Wales...ton	0 0—	8 15 0	Copper—Ordin. sheets, b.	0 0—	0 0 14
,, ..London ..	0 0—	9 15 0	,, bottoms .	0 0—	0 0 12
Nail rods ,, ...	0 0—	10 10 0	Yellow Metal&Sheathing	0 0—	0 0 9½
Hoop(Staf.) ,, ...	0 0—	11 15 0	Tin—Com. blocks g...cwt.	0 0—	4 15 0
Sheet ,, ...	0 0—	12 15 0	,, bars	0 0—	4 16 6
Bars ,, ,, ...	0 0—	11 5 0	Refined	0 0—	4 18 0
Welsh cold-blast } foundry pig .. }	4 10—	5 5 0	Straits h	0 0—	4 10 0
Scotch pig b, Clyde	3 7 6	3 10 0	Banca	0 0—	4 16 0
Rails, average	9 5—	9 10 0	Tin-Plates—Ch., IC f, bar	1 9—	1 11 0
Russian, CCND c..	0 0—	——	,, IX ...	1 15—	1 17 0
,, PSI	0 0—	——	Coke, IC	0 0—	1 6 6
,, Gourieff	0 0—	——	,, IX	0 0—	1 12 6
,, Archangel	0 0—13	18 0	Lead—Sheet k .....ton	0 0—19	10 0
Swedish d, on the spot	0 0—11	15 0	Pig, refined	0 0—20	10 0
,, Steel, fagt.	0 0—16	10 0	,, common	0 0—18	15 0
,, ,, kegs e	13 0—15	5 0	,, Spanish, in bd.	17 10—	——
Copper—Tile f	0 0—	97 0 0	Spelter—(Cake) l on spot	21 0—21	5 0
Tough cake	0 0—	98 0 0	,, ,, for arrival	20 5—20	10 0
Best selected	0 0	101 0 0	Zinc—(Sheet) m export.*	0 0—	28 0 0
			Quicksilver n .....lb.	0 0—	0 4 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in hand. *i* Discount 5 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[From our Correspondent.]

IRON.—Welsh and Staffordshire have been quiet during the week; Scotch pigs have receded, and there are sellers at our quotations; in Swedish and Russian nothing doing.

COPPER maintains its price, and enjoys a fair demand.

TIN, TIN-PLATES, and LEAD are as last quoted.

SPELTER is steady—the stock continues very low—the transactions have not been numerous or large this week; but should the money market become easier, it is probable some activity will be evinced in this article.

GLASGOW PIG-IRON TRADE, APRIL 28.—Pig-iron participates in the present general depression of trade. In the absence of speculation in the article, and from the clearness of consumers about buying, prices are receding every week. Something like a panic seized the holders this week, and numerous parcels changed hands at from 68s. 6*d.* to as low as 67s. 6d. Now, at this low figure, there are no buyers, and a further decline is looked for.

LEAD ORES

Sold at Tavistock, April 19, 1847.

Mines.	Tons.	Price.	Purchasers.
East Tamar Consols	90	£16 10 0	Mullins and Co.

Sold at Truro, April 21, 1847.

Great Callestick Moors	10	£12 10 0	Penpoll Company.
ditto	10	12 10 0	Michell and Son.

Sold at Holywell, 23d April, 1847.

TICKETING FOR 120 TONS ORE FROM FOXDALE MINE (ISLE OF MAN).

Firms.	Price per Ton.
Mather and Co.	£12 1 0
Newton and Co.	12 1 0
Walker and Co.	11 8 0

TICKETING FOR 80 TONS.

Mather and Co.	£11 12 0
Newton and Co.	11 12 0
Walker and Co.	10 15 0

Sold at the Mine, April 27, 1847.

Wheal Trelawney	70	£15 14 0	Combmartin Company.

Sold at the Mine, on the 28th April, 1847.

Barristown	50	£16 17 0	Mather and Co.

BLACK TIN

Sold at St. Austell, April 24, 1847.

Mines.	Tons cwts. qrs. lbs.	Price.	Purchaser.
Great Polgooth Mines	20 1 1 7	£50 15 0	Calenick Tin Co.
ditto	1 8 1 5	48 5 0	ditto
Total amount			£1086 11s. 9d.

COPPER ORES

Sampled April 14, and Sold at Andrew's Hotel, Redruth, April 29, 1847.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
United Mines	125	£3 5 0	South Caradon	85	£6 6 0
ditto	110	4 1 0	ditto	59	8 4 6
ditto	106	4 2 6	ditto	37	4 18 6
ditto	93	3 10 0	Treleigh Consols	95	5 3 6
ditto	92	5 15 0	ditto	92	10 19 0
ditto	91	5 19 0	ditto	45	3 17 6
ditto	90	4 18 6	Par Consols	112	6 8 6
ditto	89	5 5 6	ditto	64	2 18 0
ditto	87	7 4 0	ditto	56	4 15 0
ditto	86	4 13 6	Creeg Braws	50	4 1 6
ditto	78	4 18 6	ditto	39	7 1 6
ditto	74	3 3 6	ditto	29	1 17 6
ditto	73	5 13 6	ditto	26	4 1 6
ditto	64	4 2 6	ditto	17	3 5 6
ditto	62	4 19 0	Wh. Sisters	93	6 16 0
ditto	48	4 1 6	ditto	26	5 5 6
ditto	38	9 17 6	ditto	19	2 2 6
ditto	36	4 2 6	North Downs	39	5 11 6
ditto	23	12 6 6	ditto	13	5 2 6
South Caradon	110	8 11 0	South Tolgus	32	5 4 0
ditto	103	5 12 0	East Crinnis	5	5 0 6

TOTAL PRODUCE.

United Mines	1462	£7218 9 0	Wh. Sisters	138	£809 18 6
South Caradon	394	2790 6 0	North Downs	43	233 17 6
Treleigh Consols	232	1668 16 0	South Tolgus	32	166 8 0
Par Consols	232	1171 4 0

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

Also, to avoid trouble, POST-OFFICE ORDERS should always be made payable to WILLIAM SALMON MAYBERLY, as acting for the proprietors.

BEREHAVEN ON IRON.—A letter, signed "Ferreus," dated 14th April, containing remarks on Mr. Mitchell's Analyses, essential to the argument, has missed in carriage. The letter in last week's Journal, signed "Ferreus," April 21, being only a continuation of the other, the sequel cannot be correctly understood without that previous part.

ERRATA.—In "Ferreus's" letter, dated 21st April, *for* turgon and diaphores—*read* Purgon and Diaphorius; *for* sulphuret of lime—*read* sulphate of lime.

ON THE WORKING AND VENTILATION OF MINES.—We have in type a communication of much interest from Mr. John Darlington, of Alison Hall, near Chorley, on this subject—which we intended for this week's Journal; but, being desirous to accompany it by some remarks of our own, we find we have not the space for both—in our next, however, it will appear, as also several other letters.

PAMS.—YES: it must be paid for as an advertisement.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all the news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, MAY 1, 1847.

The condition of Ireland still continues to excite that sympathy and interest which has been manifested by all classes since the first conclusive and fatal evidence was afforded by the numerous deaths from starvation, and the attacks of typhus fever, which have so greatly diminished the population, but more especially in certain localities. The failure of the potato crop for two successive seasons, and the frail hopes entertained of the future, leaves but little to expect, without some measures shall be adopted by the Legislature, with reference to the position in which the landed proprietors are placed, who, with few exceptions, we hesitate not to say, well deserve all that may be said to result from the apathy displayed by them in succouring or affording relief to their tenantry. However, it is not with the state of the country, as regards landlord and tenant, or the remedial measures which may be adopted by Government, with the view of tilling the ground, or supplying the *materiel*, whether in money or in seed, that we have to offer any observation, but alone to the employment of the peasantry, who, having the means of purchasing meal and potatoes, with possibly the addition of a pig—the Irishman's best friend when "gale" day comes round—may encourage the small farmer to apply his energies and labour to the cultivation of the soil, and not to depend on the philanthropy or charity of others. Let us, then, see whether there are not natural means and resources which present themselves as regards Ireland, which, if properly applied, and rendered available, would, in all probability, (and judging by analogy), lead not only to the employment of thousands—nay, tens of thousands—but, at the same time, amply repay the capitalist for the monies advanced in thus affording the means of existence, more especially in those districts where the money would be expended, and which, in most instances, are the most barren and desolate soils—we refer to the mines, collieries, and quarries, to be found in Ireland. The minerals hitherto raised are generally of high produce, while evidence is afforded by the results attendant on the operations of the Mining Company of Ireland, the Berehaven Mines, the Wicklow Mining Company, and other establishments, that where capital is employed to legitimate mining, and ordinary care observed in prosecuting the workings, the most favourable results may be fairly anticipated. We regret to say that, with all the fair prospects presented by the "Sister Isle" of the advantages attendant upon mining, there is an indisposition on the part of the English capitalists to embark in mining enterprise in Ireland—while, with all the sanguine temperament which our neighbours enjoy, they have not the means, nor do they possess the talent or ability, to work the mineral tracts—at the same time, that the system of a multiplicity of agents, middle-men, over-men, and cabin patronage, is too well known to admit of a mine, or colliery, being fairly worked, without the introduction of a system such as adopted and strictly observed in this country, where "we do not keep more cats than can catch mice." We do not wish, in making this observation, to confound with the many, the few exceptions which present themselves in the Mining Company of Ireland, the Hibernian Mining Company, the Wicklow Copper Company, the Berehaven Mines, the Clare Mines, Ballygahan, Connorree, and others, which we might particularise, where, in most instances, by a judicious arrangement, as to the agents, and proper checks being established, results highly satisfactory have been attendant—neither, let it be understood, do we advocate the appointment generally of agents from Cornwall, Devon, or the north. In the latter case, much care should be observed; and no man employed but who possesses somewhat of an enlarged mind, and, although a good practical man in his own locality, yet one who must have at least seen something of the "world," and not prejudiced in favour of one course or system, and opposed to another from early impressions.

In making this remark, we do so with the full conviction, that more money is lost, more errors committed from want of caution in the onset, than from the assumed poverty of the mine. Ireland is a country which presents new features to the Cornish miner; the strata is of a different nature; the lodes, their matrix, direction, and underlay, vary much from the locality with which we will assume the Cornish miner to be most familiar—while the mode of working, the men employed, and their habits, present again a different feature—indeed, such as requires study, ere the lesson is conned of working a mine with judgment and economy. Allowing that experienced and proper men be placed at the helm, we have no hesitation in saying, that the kindly mine may be steered so as to avoid the breakers of adversity, and reach the haven of prosperity, by the united efforts of an Irish crew under the Government of an English captain. It has been said, that property is not safe in Ireland: to this assertion we must, so far as mining pursuits are concerned, give a decided negative, as the result of our own personal observation and experience—for we have ever found the people too happy to have the means of labour presented to them, not to avail of it with gladness, fully sensible, as they are, that any outbreak or injury inflicted on their employers, would have the effect of destroying the means of their support. We find that Government have resolved on affording assistance to Ireland through the several railroads projected, and in course of construction in that country, whereby labour may be afforded, and which will, doubtless, have the desired effect in certain districts of relieving the distress which too universally prevails; but we must not forget that the day will come when no longer can such a source be available. The railroads once constructed, the ordinary labour on the common roads becomes no longer necessary; while the cars to the market towns, and other modes, which give to the small cotter, or farmer, the means of meeting payment of his rent, will be no longer in existence—whereas, by the employment of capital in the working of mines, we have every reason to believe, that by a development of the mineral resources of Ireland, we should not only return the capital employed, but a handsome profit—and, at the same time, secure employment for a period which, judging from other mineral districts, nearer home, we may say, is hardly to be defined.

Let, then, our Legislators, our capitalists, and friends to Ireland, aid the object we have so much at heart—the working of the mines of Ireland; and we will not utter complaints as affects the surface, while the mineral ground and substrata shall be productive of the means of employment, and afford remuneration to the capitalist.

We may, in conclusion, direct attention to the produce of the principal mines in Ireland, the sales of which have been effected at Swansea, whereby the importance to be attached to the mining industry of that country will be rendered self-evident and conclusive. The following is an account of the produce of mines in Ireland during the two past years:—

	1845.						1846.					
	Tons.		*Amount.*				*Tons.*		*Amount.*			
Berehaven	3345		£45,766	15	6		6225		£45,013	19	0	
Knockmahon	6948		46,021	3	0		6040		39,449	12	6	
Cronebane	1448		7,106	5	0		2335		10,160	16	0	
Ballymurtagh	2773		16,951	9	6		2918		9,264	7	0	
Ballygahan	43		158	11	0		56		173	0	0	
Connorree	410		2,059	9	5		—		—			
Tigrony	577		2,940	15	0		644		2,487	13	6	
Lacksmore	119		1,031	0	0		124		941	8	6	
Cosheen	138		2,275	2	0		46		830	0	0	
Ardtully	130		945	12	0		100		650	8	0	
Lavey	—		—				93		276	0	0	
Dhuroke	102		345	8	0		30		210	15	0	
Dublin Slag	66		107	4	0		—		—			
Kildunane	35		449	17	0		—		—			
Kenmare	—		—				44		202	8	0	
Tons	18,530		£110,478	11	6		18,554		£109,632	7	6	

The question of the Navigation Laws, considered apart from the import duty on foreign ores, or their effect on the mining interest alone, is of paramount importance to, and worthy of, the most mature consideration by the members of every commercial interest in the kingdom. That their operation tends to shackle enterprise, place restrictions on commerce, obstruct the advancement of the arts, and lower the amount and quantity of freight to British shipping, is an opinion now too generally entertained, and based too firmly on experience, to be easily refuted. Under whatever circumstances the vessels of any State are refused admittance to our ports without an addition to the usual imposts—whatever article of commerce is prohibited from reaching or leaving our shores, otherwise than in British bottoms—there will always naturally arise an endeavour, on the part of such State, to interpose similar restrictions on ourselves; and any such articles of commerce *will* be sought for on, and *will* find their way to, other shores. The whole evidence, so far as yet taken before the committee now sitting on the consideration of the effect of these laws, goes to prove, that on whatever coast these laws come into force in favour of British shipping, the commodity prohibited finds ready opportunities of shipment in foreign vessels at extremely low rates of freight, in opposition to the monopolising spirit shown, and most exorbitant demands made. The consequence is, that so much freight is lost to England *direct;* and *indirectly*, all the advantages of the commerce which would have arisen from the importation of such merchandise, is lost also. There is no question of the fact—and our past few years' experience has clearly proved it—that laws made ostensibly for the *protection* of any kind of merchandise, have the effect of contracting their sphere of circulation, cramping the energies of the producers, and paralysing the efforts of the merchant and the tradesman. Of this we have had ample exemplification in the abolition of the heavy duties on ornamental paper hangings, and embossed work in general, glass, and numerous other articles of merchandise, showing that the moment restrictions were removed, the demand immediately doubled and trebled, the inventive genius of man was emancipated, and modifications, improvements, and inventions in the arts and manufactures, in every case, have followed in the wake of the removal of *protection*. We trust the day is not far distant when it will be considered politic and wise to modify the Navigation Laws to such an extent, that the produce of all foreign states may be admitted into our ports in foreign, as well as British, vessels, under proper regulations; and England, from the superiority of her merchant navy—from her powerful internal and colonial resources, and her extensive commercial transactions in every quarter of the globe—will find herself the mistress of the world, and in every respect, and under any circumstances, able to compete with the shipping of every nation on the surface of the civilised world.

In another column will be found the letter of a correspondent on subject of a charge, or bonus, as purchase-money of a mine—such having been concealed from the adventurers, and only made known at a subsequent meeting, held when the accounts were submitted. We have no hesitation in saying, that the course pursued, and of which our correspondent very fairly complains, is one too generally acted upon; in most instances, the mention of any purchase-money being payable, is avoided; and it is only when too late, that the circumstance is made known. It is, we admit, the fault of the adventurer, if he embarks in any undertaking without first ascertaining the real position of the mine, and the incumbrances, or liabilities, attendant; but, we regret to say, too frequently the adventurer is induced to embark without first instituting the necessary inquiries. It may be considered an act of policy, and, doubtless, at times, may effect the object in view by the projectors, of concealing the original transaction, or purchase of the mine—inasmuch that, ere the "first annual general meeting" be held, the shares may have changed hands, and no inquiry instituted on the accounts being presented. The only opinion we can offer on the point raised by our correspondent is, that from the representations made to him, as we are led to understand by his letter, it was his paramount duty to have offered any objection he might have had to the accounts, on the same being presented, and which, if approved and passed, as we imagine was the case, such cannot, we consider, now be mooted, or form subject of contention. We must, however, at the same time, express our opinion, that in any case where, in the prospectus issued, there should be any concealment of the provisions under which the mine is acquired, and hence information withheld, no doubt can exist but that the courts of law or equity will, at once, relieve the party injured. We merely advert to the subject in the hope that our readers will be more observant as to the terms in which prospectuses are couched, and the condition on which the mine is acquired. There is another point equally deserving of attention—viz.: that of dues and term of lease, as well as that unexpired. These are too frequently lost sight of; and, as we know, have been sadly detrimental to parties from whom terms have been exacted for an extension of the term—while the dues are too frequently neglected—it being forgotten that the royalty must be paid out of the produce, and not from profits, which latter may never be realised.

Much has been written for, and against, the policy of continuing or abolishing the import duties on foreign copper ores; and one principal argument brought forward by the advocates for their abolition is, that their existence tends to induce the smelting of copper ore, both in North and South America, and thus materially injure our copper trade in all the markets of the world. The "Protectionists" have been in the habit of ridiculing this argument; but it now appears that, at least as far as the United States are concerned, the fears were not without grounds. From a paragraph in another column, it will be found that a smelting company has been formed in New York for erecting smelting-furnaces at the principal copper mines of Lake Superior, where it is intended to purchase the ore from the mines, smelt it, and forward the copper in pigs to New York. This, at least, looks like a spirited beginning, and, although it will not be immediately felt by the British trade, there is no doubt whatever, when once smelting works are established, they will be rapidly extended.

EAST OF SCOTLAND MALLEABLE IRON COMPANY.—One of those *meetings* which unfortunately so often disturb the harmony, and injure the interests, of public companies, has lately taken place among the proprietary of the above undertaking, and which has produced considerable excitement among the shareholders. The chief actors in the scene appear to have been Alexander Alison, Esq., the chairman, and Mr. Henry Beveridge, an advocate. It is impossible to know which may be correct in their statements against the other; and we will fairly state the substance of the case as we find it in two pamphlets—one published by the latter gentleman, making certain charges against the former; and the other, a reply from Mr. Alison. It appears, that at a meeting on the 3d of February last, Mr. Whitelaw called the attention of the proprietors to a clause in the Act of Parliament, by which the directors are permitted to work a *colliery, or collieries*, which Mr. Beveridge thinking, with others, too restricted, proposed to amend it by substituting the words *mineral fields* and *minerals, for collieries and coal*. This, altogether, not meeting the views of the chairman and others, has been the cause of the misunderstanding. Mr. Beveridge goes at great length through the history of the company, and the proposed amalgamation with the Forth Iron-Works, charging Mr. Alison with having endeavoured to obtain undue advantages, cause an amalgamation of his own iron-works with the company, and thus gratify his ambition, increase his emoluments, obtain extensive patronage, and be the means of giving the Malleable Iron Company the best opportunity they ever can have, of *enriching him and ruining themselves*. Mr. Alison, in his reply, states that he shall confine himself to a bare statement of facts. He informs us, that Mr. Beveridge is lessee of certain minerals, at a place called Knockhills, which he considered well suited, in point of quality and situation, for the supply of the company with pig-iron—that the erection of furnaces there was opposed successfully by Mr. Alison; and to this he attributes the opposition and malevolence of the writer. An amalgamation with an established company, he states, is a very different matter, which would have imparted strength to the undertaking; and Mr. Beveridge at one time told all he met, that the Forth Company were giving their works very cheap, and had signified his consent to the proposed amalgamation, if the Forth Company would guarantee the cost of the iron at a certain price; and that the Malleable Company should have the benefit of all under that price, and this was agreed to. The whole affair, therefore, resolves itself into this—that the Malleable Company engages to take at least one-third part of the Forth Works; an arrangement which Mr. Alison had no doubt would be found to work well, and prove advantageous to both companies—the Malleable Iron Company thereby securing the command of a cheap and ample supply of pig-iron at their own doors, and the Forth Company a constant consumption for their pig-iron. He states that he has replied to the unfounded charges as a duty he owes the shareholders, in the way of information; but that any repetition of the writer's invective, he shall treat with contempt.

THE UNITED KINGDOM ARTESIAN WATER COMPANY.—Among the various necessaries of life, absolutely indispensable in large communities for the preservation of health, next to the air we breathe, is a continuous and abundant supply of pure water. That this has never yet been obtained in London is a fact so well established by every day experience, by evidence taken before Committees of Parliament, and by analyses made on numerous occasions by our first operative chemists, that the most interested have not the temerity to deny it. Of the eight companies supplying London with water, with the New River Company at their head, there is not one district where the filthy deposit in the cisterns, after a few days' settlement, does not bear ample testimony to the unhealthy state of the water supplied; and even this is doled out only 2 or 3 times a week, instead of every house having an unlimited and constant supply, which would secure not only cleanliness in our dwellings, but keep the drains and sewers in a constant state of comparative purity. The company under notice is formed for the purpose of effecting these desirable objects, by forming Artesian wells, not only in various parts of the metropolis, but in every town and village in the kingdom, where the local authorities shall see the necessity of a better and purer supply of this important element, than the natural resources of the district can afford. Of the practicability and certainty of obtaining an abundant supply of water, by boring in almost any situation, there is now no doubt; and a company, with a large capital at command, will be enabled to bring to its aid all the scientific improvements of the day, and secure to the public, wherever such works are required to be established, an exhaustless abundance of this absolute luxury. We understand they have nearly completed a well, in the neighbourhood of Farringdon-street, as a proof of the rapidity with which the undertaking can be carried into operation, and the benefits to be derived from a general supply of such water. It is gratifying to know, that not only the cost of this work, but also the preliminary expenses, have been defrayed by one spirited individual, connected with the company. The names in the prospectus, as directors, &c., would appear to give security of the *bonâ fide* nature of the undertaking; and there is little doubt, that a company formed to carry out such measures, and conducted with spirit and economy, would prove a great public benefit, and pay a large return to the shareholders. The capital is to be 500,000*l.*, in 50,000 shares of 10*l.* each.

ON THE HIGH TEMPERATURE IN THE CORNISH MINES.—The subject of the increased temperature in deep mines has long been a matter of great interest to geologists and miners; and, as they still increase in depth, the question becomes of more importance. At the last annual meeting of the members of the Royal Cornwall Polytechnic Society, two papers were read—one, "On the High Temperature in the United Mines," by R. W. Fox, Esq.; the other, "On the High Temperature of the Water at the United Mines," by Capt. W. Francis. From Mr. Fox's paper we find, that near the eastern extremity of the deepest level, on the middle lode, 250 fms. beneath the surface, and 200 fms. under the level of the sea, there is a spring of water, discharging 94 gallons a minute, at the temperature of 106½° Fah. This water flows from the north or upper wall of the lode—while, from the south wall, at the distance of only 3½ ft., there is another spring, discharging 30 gallons of water in a minute, at the temperature of 97½° Fah.—the air near both these springs being 104½° Fah. Killas is the only rock within 30 fms.; granite occurs at a considerable distance westward of the spot; and two elvan courses traverse the mine in nearly the same direction as the lode. One quarter of a pint of the warmest of these waters contained 15 grains of saline matter, consisting of muriate of lime and common salt; and the same quantity from the former, only 10½ grains of the same salts. Capt. W. Francis, having entered into a description of the position and character of the elvan courses and lodes, informs us, that the former, of which there are two, may be traced for several miles, and are so jointed, and open, especially near the surface, as to become ready conductors of large quantities of water; and to this is to be mainly attributed the unusual quantity of water which they have to contend with, in proportion to other mines—the quantity lifted in the dry season being 1400 gallons per minute; and, in the rainy season, about 2400 gallons per minute. With respect to temperature generally, although it is admitted that the temperature increases with the depth, yet it is not found to be the same, at the same depth, even in parts of the same mine a few fathoms distant from each other. In different mines, in the same locality, and in precisely similar formations, the result is often very different—for instance, the Consolidated Mines adjoin the United Mines; the lodes bear the same direction, and run parallel to each other; the former have been worked to the depth of 316 fms. from surface, the other only 260 fms. The highest temperature in the former is 98° Fah.—whilst in the United, at a less depth by 56 fms., it is 106°. Again, at Tresavean, the depth of which is 320 fms. from surface, the highest temperature yet observed is about 95°. The deepest part of Tresavean is in granite; and the Consolidated and the United are in slate. These circumstances go to show that there must be other causes producing heat, apart from mere depth of the mines; and, without being prepared with conclusive evidence as to its origin, Capt. Francis remarks, that the degree of heat is very much increased by its passing through immense bodies of mineralised matter, powerfully acted on by galvanic agency.

RAILWAY COMMUNICATION WITH INDIA AND CHINA.—We have perused a pamphlet,* from the pen of Mr. S. B. Rogers, of Nant-y-glo, on the practicability of constructing 10,000 miles of railway through Europe and Asia, and thus connecting London and Paris with Canton and our East India possessions, and all the great cities and provinces on its route. It is a bold idea, far from meriting the ridicule that we have heard heaped upon it, and is deserving of a far more lengthened notice than our columns will allow this week. The route proposed is by Paris, Munich, Vienna, Belgrade, and Constantinople; thence through Syria, Persia, Beeloochistan, and Sinde, to Oodipoor, Calcutta, through the Birman Empire, and the north part of Cochin China, to Canton. At Oodipoor, branches might be carried to all parts of Hindostan, not provided for by the present East India Railway Companies. An extended notice will appear in our next.

* Published at the office of the *Mining Journal*, 26, Fleet-street—price 1s. 6d.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

The Committee on the Customs Bill has begun its labours. At present, it is impossible to say when it will be able to present its report to the Chamber; and until it does so, the new measure will not come under discussion. The ironmasters are very sore at the clauses relative to the admission of iron, &c., for shipbuilding; and they have actually the modest assurance to represent that they inflict a great injury upon them. Was there ever such impudence! They avow themselves that they cannot supply the materials which the mercantile navy needs at anything like a reasonable price; and yet they growl at the shipping interest being allowed to obtain its supplies elsewhere. The dog in the manger was an angel of amiability compared to these men. They push their selfishness beyond all bounds. It is to be hoped, however, that the Chamber will treat their surly complaints with the contempt they merit. It has already shown a disposition to do so by refusing to place M. Talabot, of the great iron-works of the south of France, on the committee on the bill. The unhappy man, as spokesman for the iron interest, literally raved against the measure; and what he will do when it comes on for discussion, heaven only knows. Your well-informed contemporary, the *Journal des Chemins de Fer*, lets out a little secret, which is really curious in its way:—This very M. Talabot, who raved in this stupid manner, was actually recommended by the Minister of Commerce as a fit and proper person to be placed on the committee on the bill—that is, the Minister himself wanted to afford M. Talabot an opportunity of cutting out the only useful clauses of the bill—actually tried to enable an enemy of his own measure to ruin it! This shows how very sincere the Minister of Commerce is in his regard for the mercantile navy. But, perhaps, the explanation of his strange proceeding is to be found in this little fact, which the *Journal des Chemins de Fer* forgot to mention. M. Talabot is his son-in-law; and, perhaps, also, that little circumstance accounts for the very extraordinary, and very tender, interest which, on all occasions, the worthy Minister has manifested in behalf of the ironmasters and their monopoly! And yet he is an honourable and patriotic man—oh, very!

In some of the mines belonging to the great amalgamated coal companies of the Loire, the miners struck work to obtain the reduction of the measures to the current size, or an increase of wages. After remaining out for some days, the company consented to the reduction of the size of the measures. A petition has been presented to the Chamber of Deputies against the company being allowed to exist as at present constituted; and this petition has been referred to a committee for examination and report. When the committee shall have concluded its labours, the whole question, relative to these Loire coal companies will, no doubt, be fully discussed in the Chamber.

It appears, from returns published in the *Moniteur*, that in the month of March last, the following importations were made:—coal, 2,087,058 metrical quintals arrived—2,087,917 consumed; unwrought cast-iron, 101,769 metrical quintals arrived—107,853 consumed; tin, 665 metrical quintals arrived—564 metrical quintals consumed; pure copper of the first fusion, 5076 metrical quintals arrived—4864 metrical quintals consumed; lead, 19,367 metrical quintals arrived—10,538 metrical quintals consumed; zinc, first fusion, 10,132 metrical quintals arrived—10,132 metrical quintals consumed. On all these articles, the importation was much greater than in the corresponding month of last year, and of 1845. In coal, the increase, compared with March, 1846, is 689,153 metrical quintals; and with March, 1845, 1,373,895 metrical quintals; in cast-iron, it is 50,526 metrical quintals, and 67,614 metrical quintals. During the first three months of the present year, the importations were—coal, 4,183,721 metrical quintals arrived—4,216,835 metrical quintals consumed; cast-iron, 244,465 metrical quintals arrived—253,016 metrical quintals consumed; copper of the first fusion, 16,357 metrical quintals arrived—17,639 metrical quintals consumed; tin, 1855 metrical quintals arrived—1702 metrical quintals consumed; lead, 38,685 metrical quintals arrived—21,127 metrical quintals consumed; zinc, first fusion, 21,189 metrical quintals arrived—21,836 consumed. The increase in the importation of coal is 272,510 metrical quintals, compared with the same period of 1846, and 1,482,928 metrical quintals with that of 1845. The increase in cast-iron is 88,506 metrical quintals over 1846, and 131,217 metrical quintals over 1845. These figures are really remarkable; for they show that so immense are the wants of the country, that even the monstrous tariffs which protect coal and iron, cannot prevent the ever-increasing introduction of such articles. The amount of duty levied on coal in March last was 427,616 fr.; and on cast-iron, 557,637 fr. During the three months, it was 953,119 fr. on coal; and 1,393,337 fr. on cast-iron. On the latter, the duty is about 5½ fr. the quintal. The importation of cast-iron yields more to the revenue than 23 of the most profitable products brought into France. The only articles that produce more than it are—coffee, cotton, olive oil, wool, sugar. The revenue obtained from coal ranks among all the other articles of the tariff, next to cast-iron. Take off the duty on the latter, and its importation would yield an increased revenue to the Government.

The *Journal des Debats* announces that Kabylia, a province in Algeria, has submitted to the French; and among the advantages which it states this submission will confer on France, is that of working the rich iron mines of the Prejura. We are continually hearing talk of what *is to be* done with the vast mineral wealth, which Algiers is represented to possess—but, strange to say, we never, by any chance, hear that anything *has been* done.

A meeting of the shareholders of the Great Coal and Iron Company of the Aveyron, is called for the 18th of May, in this city.

The Great Northern Railway Company held a meeting last Saturday, at which a long report was presented by the directors. A call of 50 fr. per share is to be made on 5th of July next.

Great activity prevails in our mining world—new companies are in course of formation—old ones are changing hands—and knowing speculators predict, that in a few months, mining enterprises will be as much the rage, as railways were some time ago. French capitalists have already large sums invested in Belgium and German mines, and many of them are talking of turning their attention to speculations in English mines. I am of opinion, that if English mining enterprises were fairly brought before the Parisian public, a very great deal might be done in them.

BELGIUM.—The Government publishes, at stated intervals, a number of returns, relative to the importation and exportation of different articles. These documents contain a mass of valuable mercantile information. The last batch was published on Sunday, and I extract the details relative to metals and coal, which will interest your readers. The *exportations*, during the month of March, were as follow:—Coal, 174,656 tons, of which 153,718 tons went to France, and 18,869 to Holland; cast-iron, *en gueuses et fontes épurées*, 11,668 tons, of which 7138 to France, and 4530 to the Zollverein; rails, 972 tons, all to the Zollverein; cast-iron wrought, 25 tons, the greater part to the Zollverein and Holland; works in beaten iron, 127 tons, of which 39 to the Zollverein, and 75 to Holland; nails, 904 tons to the Hause Towns, Holland, Austria, Turkey, Brazil, and other places; machines and mechanical pieces, 194 tons, to the Zollverein, Holland, France, Spain, and other places; ditto, in detached pieces, 26 tons; zinc, unworked, 713 tons, almost all to France; zinc, in sheets, 257 tons, of which Holland took about 72 tons, England 48, and the United States 81. The tons here spoken of consist of about 2000 lbs. English. The *importations* made by Belgium, in the month of March, were 1251 tons of coal, of which 1228 came from France. Your readers will notice, that a large quantity of machinery has been sent to Spain. I know not whether the Spanish tariff favours such articles coming from Belgium—but it is, I think, hardly likely that Belgium enjoys in Spain superior advantages to England; and it strikes me as strange, that our exporters should allow this tiny country to contribute so largely to Spanish wants.

The exportation of nails and other articles to Holland, Turkey, &c., seems to me larger than it ought to be, if our exporters would only take the trouble to look after their own interests. They are too much disposed to think disparagingly of this little kingdom; but they should recollect, that it occupies a high position in metallurgic industry, and that its inhabitants are so very enterprising, that they try at nothing less than to supplant England in as many foreign markets as possible. Their exportations are increasing every day in a most remarkable manner, as you will see from these figures:—Exportations during the first three months of 1847, 1846, and 1845: arms, 893,507 fr. in 1847; 675,309 fr. in 1846; and 511,352 fr. in 1845—coal, 327,584 tons in 1847; 270,876 in 1846; and 179,603 in 1845—cast-iron, 24,384 tons in 1847; 13,966 in 1846; and 6658 in 1845—rails, 971,871 kilos. in 1847; 1,231,181 in 1846; and 135,152 in 1845—cast-iron wrought 50,510 kilos. in 1847; 45,602 in 1846; and 63,713 in 1845; iron, works in *fer battu*, 250,726 kilos. in 1847; 146,690 in 1846; 142,525 in 1845—nails, 1,699,790 kilos. in 1847; 1,201,088 in 1846; 1,341,121 in 1845—machines and parts thereof, 350,421 kilos. in 1847; 290,536 in 1846; 223,965 in 1845—ditto, detached pieces in iron and cast-iron, 137,666 kilos. in 1847; 60,426 in 1846; — in 1845—zinc, unwrought, 1,146,754 kilos. in 1847; 681,081 in 1846; 678,966 in 1845,—ditto in sheets, 409,523 kilos. in 1847; 347,537 in 1846; 274,941 in 1845.

The meeting of the shareholders of the Charbonnages Belges, which was called for the 1st May, has been postponed to Sunday, the 9th. The company is about to issue definitive shares for the promises now held by the shareholders. The meeting of the shareholders of the Charbonnages de l'Agrappe and Grisceil is also postponed from the 1st to the 8th May.

At the recent meeting of the shareholders of the Mines and Forges of Bleyberg, a dividend of 3*l.* per 20*l.* share was declared, to be paid on and after the 1st of May; and 91,417 fr., or 10 per cent., on the profits, were placed to the credit of the reserve fund.

Coalowners complain that the demand for coal is at present exceedingly slack. In the neighbourhood of Mons no coal can be sold, except in such quantities as are required for making coke.

Last Wednesday the Minister of Public Works received the offers of contracts for the supply of four lots, of 550 tons each, of rails, destined for the railways belonging to the Government. The price demanded was 320 fr. the ton (12*l.* 16s.), and the contract was accepted at that rate. Your readers will not have forgotten, that, about a month ago, the Minister made a contract for these rails at 14*l.* per ton, with the condition that the contractors should allow about two years' credit to the Government; but the bargain was set aside, in consequence of some strong observations on its disadvantageous character, made in the Chamber of Representatives. One pound four shillings per ton was indeed an excessive interest to pay for a few months' accommodation. The contract, at 12*l.* 16s. the ton, was taken by the Company of the Iron-Works at Couillet. They, however, complain of a clause inserted in the articles, to the effect that they shall be responsible for the rails remaining in good working condition for the space of two years. Such a condition is certainly hard upon the contractors, and ought to be modified. If the rails be found to be of excellent quality on delivery, there is no just reason for making the contractors run the risk of wear and tear, and all the accidents to which a railway is liable.

In addition to the rails thus contracted for, the Government entered into a contract with M. Pastor, manager of the great iron-works of Seraing, for the supply of a large quantity of chairs, at 184 fr. the ton. It had advertised for an extensive supply of bolts, but no offer was made.

Naples has just concluded the basis of a treaty of commerce with this country, which accords a reduction of 20 per cent. in the present duties on the importation of Belgian arms, and 30 per cent. on machines. The effect of this will, of course, be to increase the Belgian exportations.—*Brussels, Tuesday.*

[*From a Correspondent.*]

We have seen with pleasure in your last Number, a report of a French mine (La Poipe Lead and Zinc Mine), where a new system of operation, similar in most particulars to the mode practised in England, has been followed. The speculation is much inquired after here, and great confidence is placed by serious speculators in the results of the various combinations of that company. This undertaking, established on *societé civile*, possesses amongst its members men of capital and enterprise, and its technical details are in the hands of a French engineer, who has acquired, by his long practice in England, all the best information on such subjects. We are given to understand, that the intention of this company is to extend their operations to several valuable speculations in lead, silver, and copper, in the Alps Mountains, upon which they have obtained the most favourable reports of scientific and practical men.—We will revert again to the subject.

SILVER AND GOLD MINES OF THE NEW WORLD.—No. XI.

X. THE UNITED STATES.

Within the last 20 years the United States have tasked themselves to produce gold. The first researches were made in 1814, but it was only 10 years later that there was any appreciable result. Gold is found at the foot of the long chain of the Alleghanies, at the bottom of the ridge most to the east, known as the Blue Ridge, which, by virtue of the singular configuration by which the Alleghanies are distinguished, runs, like all the other ridges, in the same direction as the chain, and to the same extent. It is scattered in the alluvian sands; it is worked also in the rock where it has been discovered in veins of quartz in sufficient quantity. Workings for gold are also spoken of in all the states of the litoral of the Atlantic, to the south of Potomac, to Alabama, which is washed by the Gulf of Mexico. The works are thus dispersed in a straight line, of the length of a thousand kilometres. There is reason to believe, that deposits of gold exist also to the north of the Potomac, at the base of the Blue Ridge; but in that part of the American Union there are no slaves, and human labour (free labour) applied to the earth, or even to manufactures, is too profitable to be occupied in gold mines. Gold, therefore, is not worked, except in the slave states. Virginia, North Carolina, South Carolina, Georgia, and Alabama; and even there enterprise is languishing, on account of its appearing that the deposits, which at one time were much vaunted, are but little profitable. The Federal Government, in an excess of condescension, created a mint in the mountains, in order to offer to the workers an easy sale for their products; but, up to this day, the annual supply that all the mines together have furnished to the Mint has only once risen to more than 1,000,000 dollars, that is 1509 kilogrammes. The total production since 1824, to 1st Jan., 1845, amounts only to 13,594 kilogrammes. It may be admitted, that at present the Mint receives from the mines a value of 1,000,000 dollars. If a fifth be added (and that is a great deal, for the American Government putting no duty upon gold does not provoke the clandestine exportation in lingots, but, on the contrary, attracts it to the Mint by the high price that it gives), we shall have an annual production of 1800 kilogrammes. The total production, from the commencement to 1st January, 1846, thus appears to be 18,525 kilogrammes, which is a little less than one metre cube. In French money that is 63,810,000 francs (2,552,400*l.*)

XI. CHILI.

Chili possesses many metallurgic resources. A great part of the copper consumed in European arts is extracted in Chili. A little mercury is also obtained in that country, which besides has yielded precious metals since its discovery. In Chili at first gold was not wrested from the hands of the natives, or from their temples, as booty, but was picked up from the soil where it lay, the barbarous inhabitants not knowing its value. As in Mexico and Peru, and several other parts of the globe at the commencement of civilisation, there existed at Chili on the surface of the soil layers of gold of great richness, but restricted; and by these the first men a little industrious that arrived profitted. Ordinarily the layers, which furnished to man quantities of gold relatively considerable, were superficial alluvions, from which it was only necessary to gather the gold and separate it from the sand by washing. But in Chili there were veins, in the *affleuremens* of which was collected all the gold contained in the native state in the rock of the veins themselves, that centuries had separated. Gold has not ceased to be worked at Chili—they are veins that are worked; but the silver branch of enterprise has eclipsed that of gold—and since 1830, thanks to the order and security maintained by an enlightened Government, has become very interesting. It is in the valley of Copiapo that it is principally carried on. The most productive mines of all are those of Chanarcillo, worked since 1831. The silver mines of Chili possess pretty nearly the same general characteristics as distinguish those of Mexico; they are veins which cut the earth, which is here almost always stratified—that is, in regular layers, as the lands in the environs of Paris—and which, without doubt, date from a period little different from that of a commotion, caused by porphyries, or granites, projected in a fused state from the bosom of the earth. Rich ores are found there. According to a paper full of interest, *On the Geology and Metallurgy of the Chilian Republic*, published by a learned professor of Coquimbo, M. Domeyko, the yield of ores, heated in the amalgamation establishment of Chanarcillo, and the Chili mines in general, almost always exceeds 5 per 1000; in a mine near to Chanarcillo, the Colorado, the average riches is 16 per 1000. M. Domeyko says that he has seen a spot where each length of *vare* (85 centimetres), in a horizontal gallery of 2½ metres in width, yielded 230 kilogrammes of metal, or 51,000 francs (2,040*l.*) There is sometimes found a block of about 3500 kilogrammes entirely of native silver, or of silver combined with chlorine, or bromine. But if the rich ores in Chili are in a proportion relatively considerable, on the other hand the veins have less substance and regularity. They are not indefinite masses of ore as at Guanaxuato, or Potosi, where one may gather with closed eyes, on almost all points, indistinctly. The veins are thinner and less constant. The silver veins of Chili, by a circumstance frequent in the history of metallic veins of all sorts cutting successively several series of layers superposed, present themselves diversely, rich in one, poor in another;* but here the variation is extreme, from abundance to sterility. Thus, in the valley of Copiapo, may be observed at the summit of the metallic mountains, on the table land which crowns them, a mass of calcareous and marly layers belonging to that vast assemblage of formations that geologists call secondary. The miners of the country designate it by the name of *manto* (layer), properly called. In this first thickness the veins contain silver; the rock itself is penetrated with it by a thousand clefts. Beneath is another thickness, called *mesa piedra*, which is believed to be entirely sterile; it is also formed of calcareous and marly beds, but of an aspect totally different. Under the *mesa piedra* is another bed, of 120 metres thick, which is the most productive; it is a calcare, very clayey and compact. The bed beneath this shows rocks still more clayey and harder; it is sterile, and appears to repose on a mass of porphyry not yet well known, but where it is believed there is nothing worth seeking. If this character produced itself everywhere in Chili, if the deposits were thus confined, it might be supposed that the silver mines of the country might have a happy influence on the local prosperity, but not an influence resembling in any respect that of the mines of Mexico and Peru on the mass of silver circulating in the world.

The most remarkable veins of Chili, those on which all efforts are at this moment concentrated, meet at the separation of the beds deposited by the waters, and, by consequence, stratified; and the granitic beds, which, after their formation, pierced the crust of the planet, and, by their rising, gave birth to the chains of mountains, and carried to a great height beds originally submerged.† In following the line of the rising rocks, and of the rocks that were raised, we observe the surest indications of the deposit of silver. Beneath this line of separation there exist in the granites, which from thence go to the sea, veins of gold and copper; above—that is, marching towards the crest of the Andes—we meet successively veins of arseniced and silvered copper, and, still more to the east, veins of lead. We are then at a distance of 100 kilometres from the crest of the Andes; but in that interval the vestiges of the mines disappear.

Unfortunately it is not easy to follow the line of contact of the stratified beds and the granitic beds; not that it is difficult to discover, for it is signalised by great declivities of a peculiar aspect, recognised from a great distance; but all the country at this height is a horrible desert, deprived of water and, by consequence, of pasturage, of culture, of habitations, of the smallest resources. In a distance of 60 leagues, between the valley of Copiapo and that of Huasco, there are only two little water sources, so exceedingly poor, that the person who arrives with a dozen animals will not leave a drop of water for the person that may follow. It is, therefore, perilous to adventure oneself in such a spot to make researches and explorations, and the *arrieros* do not consent to traverse it, except in going straight along, without losing a minute.

The silver mines of Chili make themselves remarked, also, by the nature of the ore that dominates therein. It is most frequently a combination of silver with chlorine, considered till then as an exception, or even with bromine, which was yet rarer. There is also very regularly native silver, inextricably mixed with chlorine or bromine. These mines cost a great deal to work. The articles of subsistence are excessively dear at Chanarcillo, and conveyance is also extremely dear. The mechanical arts in Chili, as in all parts of Spanish America, remain in their infancy. It is probable that in the ores an important portion of metal is always left. The fact is, that the general opinion of the country is, that when of a yield less than 50 marcs of metal per Chilian *caisson* of 64 quintals, or of 4 per 1000, the ores are not worth treating—an opinion that would cause extreme surprise to the miners of Zacatecas or Potosi, who content themselves with a fourth or a fifth. With a road practicable for carriages, from the bay of Copiapo to Charnacillo, the trace of which is indicated by the water courses, and which would be only 150 kilometres in length, and with another road which should ascend the valley of Copiapo, to enable provisions to be brought from that part of the valley, which is of surprising fertility, particularly at the side of Potrero-Grande, the field of workable ores might be greatly extended.

[*To be concluded in next week's Mining Journal.*]

AMERICAN SMELTING COMPANY.—The following is an extract from a letter, dated Detroit, March 21, addressed to a firm at New York:—"Another important Act I also inclose, incorporating several of your wealthy citizens into a smelting and mining company—a company which will at once, as I learn, establish smelting furnaces at all the working copper mines on Lake Superior. It will purchase the ore from the mines at the pit, smelt it into pig copper, and send it to New York through the Sault St. Marie Canal. The Act was prepared by our fellow-citizen, J. N. Elbert, with the direction of some New York men, and is free from all objections, as I learn. There is no doubt the company will go into immediate organisation, and commence work early in the spring. Indeed, it has now a smelting furnace in operation at the Albion Mine; how it succeeds I have not yet learned."

MINING IN NEW ZEALAND.—We learn from Auckland, under date Dec. 1st, that a copper and coal mine would be opened in the middle of February at Mongonin, the minerals of which have been reported to be very excellent. The bark *Avoca* was to leave the next day with 350 tons of copper ore from the Kaw-aw Mine, for Sydney. The coal at Mongonin had been tried on board her Majesty's steamer, *Driver*, and turned out remarkably fine—quite equal to that obtained at New South Wales.

It is said, that a Russian company has obtained from the Persian Government, for a small annual payment, the privilege of working the turquoise mines of Nichapour, in the province of Khorassan; the stones found there are the finest in the world for quality and size. When these mines were first opened, one turquoise was found of so large a size, that it could be turned into a cup for the father of the reigning monarch.

NEW MODE OF EXTRACTING COPPER FROM THE ORE.—A pamphlet has lately been published in Paris, on an invention of Messrs. Rivot and Phillips, for reducing copper ores by taking advantage of the affinity of that metal for iron. A paper was read before the Paris Academy of Sciences by M. Dufresney; the process consists in precipitating the copper from its solution by bars of iron, and is principally applicable to the sulphurets of copper; these are first calcined, until the greater portion of the sulphur is expelled, and the copper is converted to an oxide; the oxides are then treated with silicious matters, which convert them into silicates, which, being dissolved in a properly-prepared acid, the copper is precipitated from the solution by placing therein bars of iron.

EXPANSION OF METALS BY HEAT.—That all metals expand by heat, and that, at high rates of temperature, that expansion is very considerable, is, doubtless, known to all our readers; but, as they may not probably be aware how the amount of this expansion is accurately measured, we here subjoin a description of the pyrometer, as made by M. Guyton and Professor Daniell, by which the highest degree of temperature may be accurately ascertained. Guyton's consists of a rod of platinum, simply laid in a groove in a bed of refractory clay, and baked in the highest degree of heat—this rod rests at one end on the edge which terminates the groove, and at the other on a lever with two arms, the larger of which forms a needle on a graduated arc of a circle—so that the removal of this needle from its position, by the expansion of the bar, marks the additional length it has acquired by heat. Daniell's consists also of two parts—the register and the scale; the former is a solid bar of black lead earthenware, highly baked, in this a hole is drilled, into which a bar of any metal, 6 in. long, may be dropped, and which will then rest on its solid end; a cylindrical piece of porcelain, called the index, is then placed upon the top of the bar, and confined in its place by a ring, or strap, of platinum. When such an arrangement is exposed to a high temperature, it is obvious that the expansion of the metallic bar will force the index forward to the amount of the excess of its expansion over that of the black lead, and that, when again cooled, it will be left at the point of greatest elongation. For the measurement of this expansion a scale is attached, which cannot be very clearly described without a diagram, but by which the proportionate degree of temperature, attained by different metals, can be ascertained to the greatest nicety. The following are the melting points of the various metals:—Tin, 420° Fahrenheit; bismuth, 497°; lead, 612°; zinc, 773°; cadmium, 442°; silver, 1860°; copper, 1996°; gold, 2016°; cast-iron, 2786°; cobalt and nickel, rather less fusible than iron.

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* In several of the Mexican mines, it is observed that the same silvery veins are somewhat different, according to the rocks they traverse; but the varintion is not extreme. At Tasco, the greatest riches is in the clayey schistes; at Guadalupe-y-Calvo, on the contrary, it is in the rock that the vein is the poorest.

† It is known, that the existence of mineral riches at the contact of granitic beds, or of other rising rocks with stratified formations, instead of being an accident peculiar to Chili, is one of the best proved laws of geological science; but here the line of contact is more apparent than elsewhere.

Original Correspondence.

THE GRANITE IN LANCRESSE.

SIR,—I have just returned from a six weeks' sojourn in the island of Guernsey—an island, by the way, the geology of which is tolerably familiar to me—this has been my *fourth* visit to that beautiful and interesting isle. The granite of Lancresse was the object of a renewed and special visit. If there are *fossils* in that granite (syenite), I know not where they are to be found. Proprietors of these quarries assured me, they had never heard anything of the kind—an assurance corroborated by the most intelligent gentlemen I have conversed with in Guernsey. I consider Mr. Lukis an eminent, and I will add, conclusive, authority on this question. He had never been cognisant of such a fact, and Mr. Lukis is most intimately acquainted with the geology of Guernsey, and well qualified to give a decided opinion. The existence of such fossils is *more than* apocryphal, and I conclude, therefore, that Mr. Mushet must have been grossly deceived by his informant.—J. MURRAY: *Portland-place, Hull, April* 26.

GAS LIGHTING—IGNITION OF FIRE-DAMP, &c.

SIR,—In the second edition of my work on *Atmospherical Electricity*, more than 12 years ago, I advocated the plan of simultaneously lighting up our street gas lamps by voltaic electricity, expressing my surprise that it had not been long ago acted on: it has been recently mooted as something *original*.

Six years have elapsed since I proposed, in a letter to the editor of the *Gateshead Observer*, to explode the fire-damp, from time to time, by means of Smee's voltaic battery—interruptions in the circuit of the copper wire being made with platinum, which, becoming ignited, would explode, or kindle the gas in cages of wire gauze. This proposition was attacked by an anonymous correspondent—I believe the late Mr. John Buddle; but, singular to say, there soon afterwards occurred an explosion of fire-damp in a mine, which the very proposition would have, beyond all doubt, prevented.

I am glad to find, that what I have insisted on for so many years—viz.: the absolute necessity of having *two* safety-valves of sufficient diameter, and of different construction, for every steam-boiler—is at length appreciated. Its importance must be obvious on the slightest reflection.

Portland-place, Hull, April 26. J. MURRAY.

THE MICA SHIELD—CARBONIC ACID GAS.

SIR,—I enclose you a specimen of the *ordinary* Muscovy glass, in proof of its being admirably calculated as a concentric shield for the "Davy." It will intercept no light more than common window-glass, and, moreover, is both flexible and elastic. A fall of the lamp will not injure it in any way, nor will the accidental contact of the miner's pick produce a fracture. Lateral "blowers" will not disturb the safety, nor will currents or counter-currents deflect the flame. These are the sources of danger, and thus this simple provision will guarantee an all but absolute safety, amid the contingencies of mining operations.

That carbonic acid gas, or "choke," or "after," damp, may be pumped up from the mine by the ordinary air, or water, pump, is a fact which may be demonstrated as intelligibly and clearly as any other proposition—repeatedly have I pumped it from one vessel to another. It is not only a gas of great specific gravity, but is eminently distinguished by its extreme *sluggishness*. By burning phosphorus in this gas, or dropping a fragment of potassium into it, resting over a stratum of water, the gas is rendered *visible*, and the discharge by the pump becomes then as palpable as water!

Portland-place, Hull, April 26. J. MURRAY.

[Dr. Murray has kindly forwarded us a specimen of the Muscovy glass, as above mentioned, which is almost colourless, perfectly transparent, flexible, and elastic; and at once strikes as being most admirably adapted as a means of securing safety to the Davy lamp. Those of our readers who are not acquainted with this mineral, may inspect the specimen at our office.]

GUN-COTTON.

SIR,—I confess I feel no little astonishment that a *patent* has been granted to Schönbein for the manufacture of gun-cotton, and simply because it had been repeatedly made in this country with success, before Schönbein's method was made known; while I have yet to learn that, by modifying the mere *quantity* of the sulphuric acid employed in the process, there is even an improvement in the quality of the gun-cotton—I, indeed, very much doubt it. Otto, of Brunswick, has as legitimate a claim as Schönbein, and, beyond all doubt, Pelouze was the original discoverer.

The gun-cotton will do admirably well for blasting in quarrying, mining, and tunnelling; but is altogether too unsafe and perilous for gunnery, whether in pieces of ordnance or the common fowling-piece. The very capricious and unaccountable incidents where it may explode, will always render it a very suspicious power. The circumstances under which it exploded in the experiments made with a friend, and already communicated to you, with the feeble temperature indicated by the thermometer on that occasion, however startling on a *prima facie* view of the case, seems corroborated by the experiments of Dr. O'Shaughnessy, and those reported to the French Academy of Seiences. The terrific explosion, which occurred some time ago on the premises of Messrs. Hall, of Feversham, should operate as a cavent:—A cask full of gun-cotton was buried in contact with fermenting materials, when it blew up, and the noise of the explosion was heard more than 10 miles distinct. Gun-cotton under compression, even when slight, and aided by a humid atmosphere, I consider to be pre-eminently liable to spontaneous combustion and explosion. J. MURRAY.

Portland-place, Hull, April 26.

RICHARDSON'S REVERSING WATER-WHEEL.

SIR,—Mr. Richardson deserves praise for giving a particular description of the reversing water-wheel—he, no doubt, supposing it to be the first of the kind. It is, however, extensively known, and used for winding in situations where water is readily available, being easily constructed, and completely at the command of the banksman. The first I saw was in the Forest of Dean, about 36 years ago, made wholly of wood, with the exception of bolts, hoops, and gudgeons, by the colliery carpenter, who had seen some of them in South Wales. This machine worked many years at a colliery, called Arthur's Folly, and cost next to nothing for repairs. Useful as the above application of water to the purpose of winding from a mine confessedly is, it is yet far inferior, both as to speed and power, when viewed in comparison with the *water-balance winding apparatus*. This application of water-power can only, however, be economically put in practice where the drainage of the mine depends upon an adit or water level. If your very useful Journal has not already favoured the mining public with a description of these effective winding-machines, I should be willing to send you a sketch and description of one, if I thought it would be acceptable. —JOHN WALKINSHAW: *Coleford, April* 23.

[We are obliged to our correspondent for his offer—the particulars would be very acceptable.]

IMPROVED GAS BURNERS—CONSUMPTION OF SMOKE.

SIR,—The value of any public journal must always keep pace with the accuracy of its information—not only as to the source, but fidelity of its extraction. In the *Mining Journal* of March 20, is a statement by Messrs. Paul and Co., gas engineers, in reference to the properties of their national economic gas burner, quoted as from the researches of Sir H. Davy—to wit, "That an unrestricted supply of atmospheric air, though it increased the *heat*, yet materially diminished the *light* of coal gas."

Now, Sir, Davy never said nor wrote any expression having such a meaning. Sir H. Davy states, that of all combustible gases, coal gas is least combustible, and that its combustibility increases by dilution with hydrogen, oxygen, or oxo-nitrogen of the atmosphere. He found, that, by an *absolute mixture* of common air and coal gas, in equal proportions, the heat of combustion is materially increased, whilst the light is nearly annihilated—but, with the ignition of a jet of coal gas, unmixed with air, the relations of combustion are widely different. Flame is ignited gas, but the surrounding air does not mix with the ignited gas, but only acts on the surface of the flame; hence, the greater the surface the more light, and, *vice versa*. The deflection, in all its bearings claimed by Paul and Co., forms the principal feature of excellence in Radley's patent electro-thermic porcelain gas burner—that variety, especially sub-denominated the Argand plug burner, and which, in its action on the gas flame, is certainly the prototype of both M'Neil's universal gas burner, and this one of Messrs. Paul and Co. It is not fair to eke out speculative invention, by fathering its unscientific adaptations upon the illustrious Davy.

Alluding, in another portion of the same document, to a patent for consumption of smoke, by Mr. Lord, permit me to remind you, that the patent of Messrs. Cheetham and Bailey, of Staleybridge, which consisted in returning the smoke of the furnace to the ash-pit, to be mixed with fresh air, and passed through red-hot fuel, was a failure; and assuredly this of Mr. Lord will fail also: because smoke, consisting principally of "kapnomor," blent with combustional products, either incombustible, or possessing that function in a low degree, can only be rarefied, not burnt, when once formed; the only channel, in which to look for the cessation of this loss of fuel and public nuisance, being the prevention of its formation. Messrs. Bailey found that there were two strata in the flue of their furnace—the lower one transparent, the upper one opaque, with kapnomor and sooty matters. A beautiful discovery, and their act of taking off the upper layer by the draught of a fan-wheel centre, and returning it to the close ash-pit of the furnace, whence it came, mixed with air, drawn in by the opposite centre of the fan-wheel, was equally ingenious—but Nature does not respect man's ingenuity; she is true to her own laws, which, until man understands them, he must be content to fail in imitating her, or perfecting, as regards his requirements, her operations. WM. RADLEY, Ch. E.

(Engineer to the Cardinal and Central Gas Light Company.)

Central Gas Office, Poultry, April 25.

HYPOTHESES ON IRON.

SIR,—My experiments are not yet sufficiently advanced to even hint at the constitution of the carburet, or carburets, existing in cast-iron, &c.; or to decide whether it is the same carburet existing in grey as in white-iron —this much only is certain, that both irons do contain a carburet, and, in addition to which, grey-iron contains free carbon. I shall take an opportunity of resuming the subject, when I have more experiments to support my views.—JOHN MITCHELL: *Hawley-road, April* 26.

ON THE MANUFACTURE OF IRON.

SIR,—In reply to Mr. Mushet, jun., in last week's Journal, I beg to repeat the opinion, which I ventured, on a former occasion, to advance, as to the constitution of the slag from blast-furnaces. I stated my idea, that the three principal earths—silica, alumina, and lime—ought to run together into an opaque mass, a sort of fused porcelain; that it should not be a transparent glass. I then stated my opinion that, when slag was glass, the earths had been vitrified by unreduced oxide of iron, attributing the transparency of slag to the presence of oxide—not of iron itself, as Mr. Mushet, jun., has it. This may be incorrect. In spite of the able arguments of Mr. Mitchell, and of "Ferreus," I am greatly disposed to become a convert to the doctrine of Mr. Mushet, sen., with reference to peroxide of calcium. Without much consideration, I will hazard an idea upon this point. May not peroxide of calcium exist in combination with the other earths, or metallic bases, at a very high heat—while isolated it may part with a portion of its oxygen at a much lower temperature? It has been to me, Mr. Editor, a very rich treat lately to read, week after week, in your columns, such letters as those of Mr. Mushet, sen., Mr. Mitchell, and of "Ferreus," on a subject inferior to none in interest—the formation, or rather separation, of iron in blast-furnaces, and the cause of the variations in quality. With this subject, the state of the slag, or cinder, is so intimately connected, and the approximation of clear, transparent slag to glass so very close, that an inquiry into the cause of the transparency of a combination of opaque earths, or metallic bases, leads directly to the consideration of glass-making. Looking over an account of the transactions of the Society of Arts, I observe that a great variety of useful articles are now made of glass. I have been anticipating this as a consequence of the removal of the duty, and with it of the interference of the Excise. Twenty years ago, when engaged in the manufacture of alkali, at the time the first attempts were made to introduce British artificial alkali into the manufacture of glass, I saw a little of it. I prepared a mixture for some glass-works, near Newcastle-upon-Tyne, in which I used magnesian limestone from the coast of Durham, estimated to contain upward of 20 per cent. of magnesia—being desirous of introducing a considerable proportion of that earth into the composition. This produced beautiful metal; but, on working, became "ambitty." (I write this word as it is sounded, never having seen it in print, or written.) This term, "ambitty," is applied to glass when white opaque lumps form in it. It being, altogether, a new subject to me, I gave it close attention. I noticed that the metal was perfectly clear, and free from this property, until the iron tube, used for gathering up a portion of metal to blow out, came in contact with it. Crown glass was being made. Conversing with a gentleman, well acquainted with the subject, he told me that glass was always "ambitty," if more than a very small proportion of lime was used in the mixture. The theory which I then formed for myself was, that the lime was reduced to calcium; and that the iron tube, being slightly oxidised by the atmosphere before contact with the metal, imparted oxygen to the calcium, forming lime, and producing these opaque white lumps. But the adoption of Mr. Mushet's doctrine of a peroxide of calcium, supplies a more rational explanation, by supposing that the iron tube abstracted oxygen, reducing the peroxide to lime. As I have already stated, I write this with very little consideration, trusting that the subject will not pass unnoticed. The question simply is, what causes the transparency of a mixture of opaque earths? It will, indeed, be fortunate if this slight allusion to glass-making should elicit as much scientific research, and valuable information on the subject of glass-making, as have lately appeared in your columns on that of the manufacture, or hypotheses, of iron.—SCRUTATOR: *Pontyberem, April* 26.

ON THE MANUFACTURE OF IRON.

SIR,—Your correspondent "Scrutator," in addressing you upon the subject of the manufacture of iron, started a most excellent idea, as it appears to me, but which has not been well understood by Mr. Mushet—at least, so I gather from his letter in last week's Journal. "Scrutator" proposed to employ steam as a more powerful agent than atmospheric air, for the expulsion of the sulphur, which is so injurious in the make of iron; and it does seem extraordinary, that something has not been done towards bringing into use so simple and efficacious a remedy. Possibly, it is to be accounted for by the circumstance, that the action and effect has been misunderstood by others, as well as by Mr. Mushet; and I should be glad if some of your readers, better versed in chemistry than myself, would investigate the subject, feeling assured that it would lead to some beneficial, practical result, both in the manufacture of pure iron, and in the production of other metals, with the ores of which sulphur is combined, and from which it is desired to expel it. It is entirely a question of chemical affinities: on the one hand you have water, composed of oxygen and hydrogen —on the other the ore, consisting of a metal and sulphur. Now, if these are brought into contact, a mutual decomposition and re-arrangement will be found to take place, and the sulphur is carried off with the hydrogen; while the metal retains, for a time, the oxygen, which is the effect, as I take it, intended to be produced by "Scrutator." It is essential, that there should be contact of the two agents to produce decomposition; and it is essential that there should be decomposition of the water, or steam, and not a mere damping with water, as Mr. Mushet infers. Some persons may object, that the steam may lower the temperature of the furnace, but I do not think that is to be apprehended; the steam may, moreover, be heated as air is in the hot-air blast, and, when decomposed, will actually itself serve as fuel. The subject, of an improved manufacture of iron, is a very important one, and I trust "Scrutator's" suggestion will not be overlooked.

April 26. GOSSAN.

SMELTING BY ELECTRICITY.

SIR,—Having seen it stated in the *Mining Journal*, that the smelting of copper ores by means of electricity, was one of the great discoveries of 1846; and, having before heard the subject alluded to, without being able to ascertain whether it is a mere rumour, or whether a patent is really in existence for such operation, I shall feel greatly obliged, by information being conveyed through your columns, as to whether any person has obtained a patent for separating the ore from the matrix, by the powerful effects of electricity; and if so, how the process is carried on, and when it is likely to be publicly carried into effect.—F. B.: *Poultry, April* 2.

REDUCING COPPER ORES BY ELECTRICITY.

SIR,—Will you inform me of the nature of this new process of reducing copper ores by electricity. I have been an attentive reader of your Journal for some months past, and do not remember to have seen any other described than a French invention (MM. Galtier and Claubry's, I think). A few days since, I was told that it was Napier's patent—but, on looking over that gentleman's specification, I do not perceive anything that can be termed an electrical process. A solution of this slight difficulty will greatly oblige.—J. H.: *Cornhill, April* 27.

[We are not in possession of further particulars than those already published; but as soon as additional information can be made public, we believe it will be conveyed through our columns.]

VELOCITY OF AIR—BIRAM'S ANEMOMETER.

SIR,—Observing, amongst the valuable and voluminous correspondence in your excellent paper, a notice from Mr. Storey, that "there is no ready practical method of ascertaining the velocity of the air in the air-courses," &c., I beg to call the attention of your correspondent to Biram's anemometer: this instrument is manufactured by Mr. Davis, optician, Derby, and is well worth the attention of colliery viewers and scientific persons, interested in the subject of ventilation. J. T. WOODHOUSE.

Overseal, April 26.

ELECTRICITY IN MINE VENTILATION.

SIR,—Mr. Bath having cut off one horn of your correspondent "W.'s" dilemma, I will attempt to cut off the other, by the inquiry—what is the amount of hydrogen gas liberated in a year "by all his coal mines in Cornwall?" and also, what superficial extent in acres is undermined by the largest tin or copper mine in that county? D. MUSHET, Jun.

Gloucester, April 27.

APPLICATION OF ELECTRICITY IN MINE VENTILATION.

SIR,—Your correspondents, who advocate the application of electricity, seem to overlook the effect of exploding carburetted hydrogen—carbonic acid gas would be formed, and that must be removed before the miners could live in the workings. I think "Scrutator's" idea of confining a portion of the most dangerous part of the atmosphere, and removing it without allowing it to mix with the current of pure air, is deserving of consideration. Could it not be forced into a light copper vessel, something like a small boiler on wheels, and compressed in the way that the Portable Gas Company used to send out their gas? Pray is that company still in existence?—M. J.: *London, April* 26.

STEAM-BOILER EXPLOSIONS.

SIR,—I beg to inquire whether "E. G." can account for his fixed safety-valve by the different expansibilities of metals: I can only conjecture its form; but when we recollect the expansion of brass by heat is nearly double that of cast-iron, it appears not an improbable cause. Were the inner parts of valves made of a less expansive metal, and the outward parts of a greater, the freedom of their working would only increase with the heat.

Gloucester, April 27. D. MUSHET, Jun.

STEAM-BOILER EXPLOSIONS.

SIR,—I am sorry to trouble you again; but "X. Y. Z." wishes to know how water could be forced into a boiler, when the lapping, or packing of the plunger, had come off? The plunger fits the force-pump tight—but to make it completely so, a groove is cut in the middle of it, and lapped with white cord; this coming off, in the way mentioned, the plunger was unable to keep the boilers up, but still continued to force an insufficent quantity of water into them, and they were dry and red-hot, when I caused the engine to be stopped, as stated. I may mention a fact (perhaps worthy of his notice) relative to incrustations of steam-engine boilers. The boiler of one of my high-pressure engines is supplied with water cold from the river, and not the least incrustation ever takes place; the other engine-boilers have a heating apparatus—*i. e.*, the cold river water is pumped into a metal cistern, through which the discharged steam from the engine passes, and is partly condensed, and, consequently, making the water in the lower part of the cistern warm. On using the river water this way, a hard crust is in a very short time formed on the bottom and sides of the boilers. "X. Y. Z." says, all valves should be inaccessible to the engine-man but one; this may do in many instances, but not very well in mine—one of the steam-engines having to go nearly all the 24 hours—through the day at a pressure of 15 lbs., and in the night at a pressure of 34 lbs. E. G.

April 26.

STEAM NAVIGATION—IMPORTANT SUGGESTION.

SIR,—Upon reading over Mr. Leighton's letter, in your Journal of last week, I was struck by his remark, that a blast, for keeping up the steam on board steamers, would be more certain than the varying and unsteady action of a funnel in rough weather. I beg leave, through the medium of your columns, to offer a suggestion to that gentleman upon this subject, which seems to interest him so deeply. A number of first-class steamers (amongst the rest the *Great Britain*) have been lost within a few years, and in each case the cause of the disaster was the vessel being out of her computed course. May not this have arisen from the circumstances to which Mr. Leighton alludes—the varying and unsteady action of the draught—in consequence of which, the engines had not been performing their estimated work? I think Mr. Leighton would do well to institute inquiries into the circumstances of some of these cases. H. COX.

Battersea, April 30.

VENTILATION OF MINES—MR. GIBBONS'S SYSTEM.

SIR,—In reference to a paragraph in a letter of one of your correspondents, contained in your Journal of the 17th inst., I think it right to state, that I caused an air-chimney and ventilating-chimney to be constructed upon a pit belonging to John Williams, Esq., in the township of Oldbury, 12 months ago—that the pit has been worked by it ever since, with complete success, and that no pit can be better aired. J. O. BRETTELL.

Dudley, April 27.

VENTILATION OF MINES.

SIR,—I saw in your Journal of April 17 (but not in time for your last week's paper), a letter, signed "Henry Johnson," full of misrepresentations respecting the plan of ventilation at the Yew-Tree Colliery, and the following paragraph:—"Horrible and shameful to say, another explosion has taken place *since* the seven boys were burnt, but, miraculously, only one man was slightly burnt." This is a pure and unmitigated falsehood. He also says, that "John Williams, Esq., has no pit ventilated by an air-flue and chimney, near Oldbury;" and this is also false. I have Mr. J. O. Brettell's authority for this fact, who adopted it in one of his pits 12 months ago; and to say, that he has worked it ever since with complete success, and that no pit can be better aired. The statement, respecting the coroner's inquest and the witnesses, is equally untrue—but upon this subject it would be indecent for me to enter, whilst a man is waiting his trial, not upon the verdict of one only, but of two impartial and respectable juries, convened in two distinct parishes. As to another explosion, I have a voluntary declaration, signed by the charter masters, doggies, or overmen, and *every* man employed in the Yew-Tree Pits, indignantly denying that any explosion whatever, or chance of explosion, has occurred in the Yew-Tree Pits since the accident occasioned by Love,—and which I also positively assert. In cutting up the narrow channels by the side of the coal to detach it, previous to dropping it, an escape of gas occasionally takes place in *all pits*, in case the coal yields any gas; and provided a man negligently places his candle in an improper place too near, so that the gas, in flying off, catches the flame, it will flash, but could not seriously injure any man. In such a case the men would laugh at him for his carelessness, and they seldom think it worth mentioning to me. If any such trivial circumstance has occurred, and a person makes a statement founded upon it, that it occasions an explosion, or any danger, or a miraculous escape, I say such a statement can only be made with a wilful intention to deceive. I declare, that no man has lost half an hour's work at the Yew-Tree Pits from any explosion, since the accident occasioned by Love. The workmen are universally favourable to the plan; and, if they were not so, it is well known to any one acquainted with the scarcity of thick coal colliers, that no effectual influence can be used over them, for they leave a pit for the slightest reason, being secure of instant employment—notwithstanding which, we daily refuse many applications for work. I have now done with this person—but, if he perseveres in his course of reckless mendacity (which, for the second time, I have exposed), he may find that the laws of the country will not suffer a calumniator to indulge his evil passions with impunity. My livelihood and my family depend upon my character, and that I will try to protect. The coarse language employed needs no comment from me, for it will be properly appreciated by your readers, and exposes the purpose for which it is used. As I may not soon trespass upon your columns again, allow me to address a few words to the scientific gentlemen at a distance, particularly in the north, who have noticed the plan of ventilation pursued. The Yew-Tree Pits are open to all who wish to inspect them; and if some of these gentlemen would visit them, they will receive every information and attention from me. They will perceive, I think, that the rapid currents and great supply of air so indispensable in the Newcastle coal, cannot be made use of to ventilate our large cavities (some of which are twice the size of Westminster Hall) with safety, or effect, and that a different system, and less quantity of air, are necessary, which we are obliged to regulate by the size of the air-passages. M. TAYLOR,

Kingswinford, April 27. Mine Surveyor to the Yew-Tree Colliery.

GOVERNMENT INTERFERENCE IN MINES.

SIR,—The paper read by Mr. Richardson, before the meeting of Civil Engineers, contains an error, which it is important should not receive the apparent sanction of that eminent body. It passed, perhaps, from their attention being absorbed by the discussion of Government interference—a question of moment, fraught with great danger to mining interests, were it not that really those dangers make the effect impracticable. I believe no manageable code can be formed—but, although this difficulty be our protection, in *fact*, it does not determine the subject of interference in *principle*; and I trust, through your valuable columns, to see such arguments offered on this point, that the notion of interference may be set at rest for ever. It is the glory of Englishmen, that, by their own energies of independence, they have created those public works, which can only creep into a crazy existence abroad, beneath the step-dame eye of State; and it is paramount at this time to check the tampering spirit, fraught with specious mischief, whose consummation would prostrate our manufacturing superiority. There are men never content in their sphere, seeking always to devolve its responsibilities on some outward form—loving far-fetched fowls, with fine feathers; we have importers, who would assimilate all our institutions to foreign models, cronk over the *disgrace* of our *private* doings, in which they think the public-spent drones of Government interest themselves—whereas they, indeed, mistake our honour for our shame. There are plants indigenous to a soil—hot-heads, who transplant them, without reference to this property, produce results, which may be predicted. There is ever some favourite topic which orators, and those, whose calling is excitement, live upon: benevolence, when used aright, is the most godlike human quality; but it requires a godlike prescience to use it without injury, or making mischief greater than it attempts to cure. The benevolence of the slave-trade, carried forward by excitement, has inflicted intenser misery in one single slave-ship, where human goods are stowed and smuggled, than the whole amount of real suffering endured by slaves through an unlimited period of labour. Education has been a bone of tumult with importers—some years since, it was the "Prussian scheme" must be imported, to grace and shame British stolidity; the essential feature indigenous in that system, was never so much as spoken of—viz., a measure of police, controlling, when introduced, an unsettled military state. These foreign panaceas, magnified before us, are chiefly a *cure* for some *disease*, which we are blessed with the absence of. Who, that sees a sickly body, dragged along on crutches, would furnish himself the same incumbrances, having full possession of his health and limbs?—or seeing opium, or ether, soothing violent pain, would swallow either from the mere love of example, and condemn his abstaining friend for negligence? A gift, the wise king has said, destroys the heart—intervention between our energies and duties annihilates both. The sense of duty of the master, in providing for the workmen safely, and their duty in caring for their own, would be sadly weakened by appeal to a third party, whereon both must seek to rely. It would but introduce a new system of middle men, known as the most noxious of diseases which attend on commerce. Assuredly, if an adequate number of inspectors are found capable to pass judgment upon miners, mine agents, and bailiffs, a more healthy and beneficial occupation for them will be the office of agent and bailiff. We shall gladly receive the accession of men superior to those now employed, and will afford their acquirements better salaries than Government can offer. Employed in the active *improvement* of our mines, their energies will produce more advantageous national yield, than stalking paralysed in an accidental search for faults. I saw last week a dying speech, exonerating murderers from guilt, because the *State had not educated them to do better*. Monstrous if this be, it is a fair application of the principle of Government interference in private affairs, which are out of its sphere; were an act for mines passed to-morrow, we should have another before the end of the session to amend it, and another to amend that, and each amendment would make the latter worse. We know it to have been the case in all popular Government improvements; whilst agitation is going on, the attention of masters and men will be distracted, care and enterprise suspended, and the last state of these things will be worse than the first; the only question I have seen, which falls legitimately in the province of Government, is *the infliction of penalties* for proved neglect. This is the correct object of an executive; how far it may be wanted, deserves to be considered. This will only modify the old law of deodands. I am an advocate for severe effective punishments; our social bonds are dissolved daily more and more, by that morbid sympathy for criminals and crime, which is the bitterest cruelty to the virtuous. If it can be shown that the law, in its present state, is not sufficient to punish neglect severely, and something more is needed, in God's name let it be done; I am sure we will not shrink any of us from any stimulus, which may remind the slugglish or indifferent of their duty. There are cases where there are many interests, where such a thorn might stimulate to unity. Several men are naturally slower to resolve than one. It is possible, had there been a penalty as a memorandum, to remind *all* the proprietors of danger hanging over themselves and men, the additional pit might have been sunk at Barnsley, which had been only *talked of*—but, whatever decision may be arrived at on this head, I hold the present laws are quite sufficient to enforce such penalties, and obtain evidence of their propriety. It will destroy the character of mining operations, to place them under criminal surveillance—a degradation, with the worst consequences, will ensue, and a constant oscillation towards the hollow centre of a paid inspector. Animate the duty of a providential care on the part of the masters to their men, and cultivate the benevolent dependence of one on the other, by a sense of which *alone* any proper work can be carried forward—but seek not to rely on introducing strangers, who, while they have less interest, must necessarily have more ignorance than either of the parties they are to arbitrate for. It is a false dependence, the majesty of the law will be far more respected on the intelligent evidence of experienced miners than inspecting officers. Let the *mining interest* centralise, meet, form regulations, and determine what is best to adopt; let *their code* be promulgated to the utmost, with contracts to support it. I should wish, indeed, to see such document published in your valuable columns—but until this is done, and it is a task of no small difficulty, how merely is it a mockery to appeal to Government. In the name of Fate, how can a committee of honourable gentlemen, by calling evidence, to acquire some faint rudiments of practical knowledge, achieve the settlement of details complicated and comprehensive, whereon the practical themselves differ in opinion. The thought is a chimera; had we a mining college, with transactions weekly in your Journal, the dream of Government interference would be ended.

Gloucester, April 24. ——— DAVID MUSHET, Jun.

ON THE VENTILATION OF COLLIERIES.

SIR,—When I addressed my letter of last week I had not the opportunity of seeing the report of Sir H. De la Beche and Dr. Playfair in 1846, which is now before me, and which bears materially upon the question of Government legislation in the affairs of the mines. These gentlemen undertook to report at the request of the Earl of Lincoln, then Home Secretary, whose letter to them bears date 27th August, 1845, and contains, amongst others, the following passage:—"And as these are subjects on which great interest has been expressed in Parliament, and upon which it may be found impossible to provide all the necessary remedies, but through the intervention of the Legislature, it is desired to take advantage of the present recess, to collect and to digest the requisite information—so that the whole question may be brought under the consideration of the Government at latest by Christmas next."

In consequence of this request, these gentlemen undertook a number of experiments upon the nature of coal, and investigated, with great skill and industry, the quality of the gases, with the peculiar circumstances of their discharge in the course of mining, the effect produced by the changes of atmosphere, with some useful observations as to the employment of Glauber salts and lime after explosions. With respect to the quantity of air necessary to be thrown into mines to prevent explosions, these gentlemen observe—"All this must be determined by practice, to suit the varying conditions of different mines; it is certain that improvements may be made on the rude methods now in use for effecting the necessary mixture." After enumerating various devices, that have been suggested, they say very properly—"We do not stop to consider these plans—because, as we have already stated the conditions, under which coal is worked, are so numerous, that a plan which might prove useful in one pit would be wholly inapplicable, and sometimes positively injurious, in another." They then discuss the merits and properties of the respective safety-lamps, and show that, under peculiar circumstances, none of the safety-lamps are proof against explosion, although, generally speaking, they are, in ordinary mixtures of gas, practically safe. After animadverting upon the inadequacy of single brattiched shafts, the ill arrangement of stoppings for guiding the air-current, and the general imperfection of the ventilation, &c., they say—"So various are the conditions under which collieries are, or can be, worked in the United Kingdom, that we would suggest for consideration (if legislative measures should be deemed advisable, and an extension of the principle which regulates the employment of women and children in our mines, and the labour in our factories, be thought good), that effective discretionary powers should be vested in properly-qualified persons, appointed in convenient districts—so that the needful adjustment to conditions may be effected, and no single system be attempted, inapplicable to our collieries as a whole—a local examination and inquiry, with power to adjust to special conditions, would, we apprehend, remove the difficulties, which the Legislature has felt in dealing with interests so important." "Jealous, as the coalowners should properly be, of any undue intermeddling with their collieries, it may, nevertheless, be true that a judicious system of superintendence in a district, by which the proper ventilation of collieries, efficient knowledge on the part of subordinate agents, and proper punishment for foolhardiness or carelessness, on the part of the colliers, may be secured, would be a great advantage to them individually and collectively, and be the saving, not only of lives, but of much capital—securing them, in the case of accidents, from many an unjust accusation of neglect."

The conclusion of the report is important—"While, in some localities, there is so little to improve, that it becomes subject of regret, that such examples should not more generally be followed—in others, it becomes matter of surprise, how the works can be permitted in so defective a state, seeing that the owners themselves suffer much loss thereby. Under such a state of things, and considering the number of valuable lives annually lost by colliery explosions—the continued risk to which so many are daily exposed—the national injury sustained by the imprudent and careless mode of extracting coal in many localities—and that the workings for coal must be adjusted to local conditions, we are led to consider, that these evils might at least be mitigated, by the careful and judicious inspection of convenient districts by competent persons—the necessary funds to be raised from such districts by a very slight impost, not ever exceeding a farthing on each ton of coal raised in it; and we believe that the cause of humanity, and the interests of the coalowners, would be alike benefitted by a well-considered legislative measure of this kind."

In this report, thus coming from two such distinguished individuals, we have a conclusive answer to the resolution of the Institution of Civil Engineers, wherein they characterise "as useless" the labours of all Government commissioners upon this important subject. These gentlemen have most wisely come to the conviction, that no general principle of working can be made to apply to so many different circumstances—but they declare their opinion, that much good would be derived "from the careful and judicious inspection of convenient districts by competent persons"—therefore, they would, indeed, have mistaken the object of their appointment, if they had endeavoured to discover some special system, which it would be the object of the Legislature to enforce. I feel extremely glad, that my previously-expressed opinions upon this subject should be supported and corroborated by such eminent men—viz., that Government legislation, properly carried out, would not only be a great means of saving the working miner, but it would tend greatly to the advantage of the owner of the property, by cheapening and facilitating the extraction of the produce; and, if so, these important national resources of the empire would be proportionably economised without legislation—all the controversies, with which the public journals are filled, and all the discussions of learned bodies are thrown away, because there is no proper authority to decide the right and the wrong. It appears, therefore, that the subject is as ripe for legislation as ever it can be; the petition recently presented from Yorkshire, in addition to those numerously signed by the colliers, show that the utmost dependence is entertained, that Parliament will, without delay, turn their attention to the subject.—*D.: Newcastle-upon-Tyne, April* 28.

MR. RICHARDSON ON VENTILATION.

SIR,—Mr. Richardson has committed an error, in stating the air passages, which ventilate a mine, should be expanded in proportion as the air expands with heat. Had he been treating with an extrinsic power, where the object is to apply a fixed force to the discharge of a given quantity of air, this rule would have been correct. Thus, in a hot air furnace, the apertures of emission are raised in proportion to the expansion of the air, if we wish the engine to do the same duty. But the ventilation of pits is entirely different—here the motive force is intrinsic, and is the air itself, following different laws, which the advised expansion will destroy. The air rising in the upcast has to meet and overcome the pressure of a descending column of atmosphere above it, which can only be effected by *momentum*. Now, if the air in the workings be expanded to double its volume, and the area of the upcast proportionally increased, the momentum, compounded of the velocity and weight, will be *one-half* diminished—for the weight will be halved, while the velocity remains. It is singular, so great an error should have been unnoticed: several of your correspondents have likewise fallen into it; and, with the exception of Mr. Deakin, who has stated *he never knew an upcast too small to air a mine*, I have not seen an indication of the true practice. If it is wished to carry the ventilation effectually forward, without loss of power, the ventilating passages must be *contracted*, and not *expanded*, in a certain proportion to the heat—so that, by increased velocity, compensation may be made for diminution of weight. The principle is in general understood, and is applied every day to the construction of flues and fire-places, which are not by any means *expanded* in proportion to the heat of the air. By this rule, an air furnace for melting cast-iron should have a chimney 80 times the area of the fire bars. Velocity may be increased by contraction, until the amount of rubbing surface in a small area detracts from the power. The plan of Mr. Richardson would have other prejudicial effects. The *heat of the air* being the *force*, an expanded upcast will add to the cooling surface, and dissipating heat do great injury: in this, as in every thing else, the solid facts of Mr. Gibbons's book are a substantial denial to the objections of superficial theory. He finds, by practice, that his small air-chimney forms a natural upcast in sinking pits, carrying off at once the smoke of gunpowder to the great economy of time;—and this is because they establish the velocity and concentration of the ascensive power. Cause the expansion of the funnel at the downcast if you will, this is the principle of the wedge applied to fluids, and you will accelerate the descent of air; but endeavour to cleave the atmosphere at the orifice of the upcast, by applying the *inverted end* of the wedge to the obstacle; and it is not difficult to predict the result. The orifices of chimneys are always contracted to apply the wedge to the superincumbent air, and the habit is to use just that shape, which, by a known formula, gives the greatest amount of efflux. A taper chimney pot acts on this principle, and the circular aperture is that which offers most effectual resistance to the descending air. Your correspondent, "D," will therefore perceive, that Mr. Gibbons's plan, which succeeds in practice, is also correct in theory, and very different to what he characterises it. The plan of Mr. Richardson would, under ordinary circumstances, ensure a degree of natural ventilation in a direction contrary to what he wishes it; when artificial means were used, it would destroy a great share of the power, and, upon any casualty, ensure an effectual reversal. I beg also to correct an error made by "D.," in calculating the areas of ventilation in Cheshire—instead of the proportion being 5 to 1, as he states, and which is no greater than proper to ensure velocity and momentum, the figures are 172 to 16, or nearly 11 to 1, which, considering the addition of heavy smoke from a steam-engine, it is not surprising should have checked the ventilation.

Gloucester, April 24. ——— D. MUSHET, Jun.

MINING MACHINES—FIXED LIGHTS.

SIR,—I think Mr. Storey's proposal of machinery is not deserving the ridicule which has been affixed to it. Rightly considered, we shall perceive the hewing of coal is in its aboriginal state, and justly comparable to that mode of primitive dealing with timber, when a whole tree was taken to form one plank. There has been no economy introduced for cutting and dividing coal, whilst timber has been economised an hundred fold. It may appear an amusing speculation, that coal threshers should beat wits out of the field; and by striking put an end to strikes; but I recollect distinctly in the year 1814, hearing the convulsive efforts of a coasting captain, in the agonies of laughter, to relate that he had been told ships somewhere in Scotland had been made to go by steam. Practical men engaged all day in seeing that done well they have been brought up to, and finding the task absorbs their energies, are naturally suspicious, and very justly, as to the probability of anything further being effected, anticipating double trouble, and centuple impossibility. But, nevertheless, consistently with the history of invention, I believe that a machine will, and can be, constructed, whether Mr. Storey's or not (for I am not acquainted with his details), to the great economy of both coal and labour. The hint of fixed lights is likewise of substantial moment. There are obvious difficulties, but I see nothing but may be counterbalanced; it is unquestionable that moveable lights have been one of the most fertile sources of disaster. *Some gas* will always remain, whatever the improvements; and we shall never extinguish altogether these casualties by explosion any more than falls of roof or coal, or other hazards to which all callings are liable—therefore, no precaution should be despised. Fixed lights may reach an intensity inconvenient with portable lamps. The best construction of safety-lamp—and the Clanny lamp is, I believe, the most brilliant—may be applied, making the workings far more luminous than by single candles, and at less cost. In parts where there is any hazard, they may be furnished with air through a lower orifice, conducted by a hose lying on the ground, and carried to places copiously supplied with air. A chimney tube over the lamp, of 18 in. height, would deliver the heat so far above the flame as to protect it from any descent of inflammable air; and, for increased caution, the hose might be guarded into compartments by wire gauze partitions, against the event of an explosion. But there would be little danger of this, where air was exhausted at the level of the floor. I know nothing of Mr. Storey's plans, and hope he will excuse my speculating on them. The use of anemometers would be a great accession, as I am convinced currents are often prodigiously overrated. The information regarding steam is what I wished to receive; there are obviously opposing forces in the *heat* of the steam and its *condensation*, which presented with the first idea a complication of difficulties, and I make no question Mr. De la Haye is correct in the amount of waste. To use steam for heating tubes in the upcast meets exactly a point I have lately been considering—how the vast available motive-power gained by rarefaction of a deep pit could be combined with that safety from explosion, which a furnace at the bottom can never ensure; and where the heat is carried continually forward with the air, there is a great waste of efficacy. I think Mr. Storey's remarks are altogether the most useful, practical, and substantial, which have appeared in your Journal at this time on ventilation. It does not appear, however, from his description, that the steam was applied at any depth in the mine. DAVID MUSHET, Jun.

Gloucester, April 27. ———

VENTILATION OF MINES—MR. GIBBONS.

SIR,—I cannot let pass unobserved a part of the report copied from the *Wolverhampton Chronicle* into your valuable paper of the 10th April, of the adjourned inquest held 1st of April, over the lads burnt in the Yew-Tree Colliery, Kingswinford—"that if the newly-applied top air-head and chimney (trumpeting) had not been in use at the time of the explosion, the bandful of men going down the downcast shaft at that time, must have been blown to atoms." Could Mr. Moses Taylor be cognisant of such a statement? Why, the very idea that an opening of 4 ft. area would take off an instantaneous expansion caused by the ignition of highly inflammable gases, with *greater* facility and safety than an area of 38 ft., must appear to any practical man quite ridiculous. I would ask, what must have been the consequence, if the explosion had been a terrific one, with the bandful of men descending in the downcast shaft; yet we are told, "the thorough ventilation of the pit was duly attended to, and stringent regulations observed"—I ask, in pity, this "intelligent and indefatigable bailiff," whether he ever knew its parallel in South Staffordshire, that for seven lads to be put to brush or throw into the air current all the gas they could possibly dislodge, without, first of all, the proper authority examining and reporting all to be safe, and then not at a moment when a bandful of colliers were descending to their work. It also appears, that steps were taken to ventilate a space or excavation, of, probably, 200 cubic feet, cut on a tolerably horizontal plane; but a space of some 2000 cubic feet, cut on an incline plane, severing a dislocation, from which a stream of gas undoubtedly flowed the moment it was severed, no steps were taken to ventilate at all; but, probably, Mr. Moses Taylor fancied that the gas, in the latter case, would obey *his* orders—viz.: *flow down hill*, as it will be seen, on reference to the section illustrating Mr. Gibbons's pamphlet, that the lower surface of a reservoir of gas is described as keeping on the same incline plane as the coal seam, or 1 in 20. I fancy, Mr. Editor, we shall have on record, ere long, sufficient sacrifice of human life, though permanently or temporarily, reducing the air passages in mines, to cause greater attention to be paid to these all important points; the inadequacy of the present air-head, of 7 ft. area, made use of here now, was very justly condemned, and one of greater area recommended by the surveyors, who inspected the late Oldbury explosion—therefore, if 7 ft. area is found insufficient, how can we expect *a four feet area to act?* At the late Barnsley explosion, it appears a scaffolding, in size nearly equal to the downcast shaft, was allowed to remain in it for some weeks. I consider the result obtained by your Newcastle correspondent, "D.," of last week's Journal, by making *a shaft twenty-eight feet area* the upcast, instead of an upcast of *twelve feet area*, "which gave immediate and general relief," quite conclusive, and what must have been evident to every practical miner, and is well worthy the attention of Mr. Moses Taylor. It is not my province, I assure you, to endeavour to write up, or write down, any mode of mine ventilation that is not deserving the patronage of coalowners generally; that my first request of Mr. Gibbons was not at all ill-meant, but was in consequence of his putting down and condemning, in his newly-written pamphlet, every mode of mine ventilation, both mechanical and artificial, other than his own; and to elicit information and facts, if any, which did not warrant the attack I received from his bailiff; but I do sincerely hope, that both him and his worthy employer, will, ere long, either see the error they have fallen into, or perfect and render inexplosive the mines under their control, to the satisfaction of themselves, and benefit of the community at large.

Dudley, April 27. HENRY JOHNSON.

VENTILATION OF COLLIERIES.—In the House of Lords, on Tuesday evening, the Earl Fitzwilliam presented a petition from the coroner's jury, which sat at the inquest on the unfortunate victims to the late awful calamity which took place at the Great Ardsley Main Colliery, near Barnsley. The petitioners prayed for an efficient system of inspection of coal mines, with a view to secure a better system of ventilation than any now in operation, and, by such improvements, the prevention of explosions. His lordship said, as far as he was individually concerned, he could not have the slightest objection to the establishment of some such system of inspection, more particularly if it could be shown that it was likely to be available in preventing explosions, and the consequent loss of life. There did already exist a system of inspection in coal mines for other purposes, and he could see no reason why an examination, at stated seasons, into the means of ventilation employed, and daily as to its effective working, might not be added to the other duties of these inspectors.

VENTILATION IN COLLIERIES.—At a meeting of the Geological and Polytechnic Society of the West Riding of Yorkshire, the Rev. William Thorpe read a paper "On Ventilation," from which he drew the following deductions:—viz.: 1. That the goafs are most frequently the sources of the explosion; and that large irruptions of gas out of them often take place from sudden falls of roof.—2. That emission downwards of gas from an upper seam of coal often causes explosions; and 3, that a low state of the barometer showing danger, the fire-damp within the goaf requires constant watching.—He states, that *about* 4000 *persons have been destroyed by explosions within the last* 15 *years*; and the misery heaped upon their surviving families is inconceivable. He recommends that all collieries be placed under the surveillance of Government—that the same air should not travel more than four miles—that the quantity of air, its rate, and the boundary in the goafs of inflammable air, be periodically examined and registered—and that between all the goafs and the workings, there be kept up a brisk and regular ventilation—that the Davy lamps in use should be daily inspected by a competent person before entering the mine—and that the best means for the resuscitation of those recovered after explosions by artificial respiration, galvanism, &c., be published for the use of all owners and viewers of collieries.

INCRUSTATIONS IN STEAM-BOILERS.—A new scheme has lately been added to the voluminous list of methods of avoiding the evil of incrusted deposits in steam-boilers, and which professes to do great things in the way of keeping the metal clean. The inventor is a M. Delfosse of Paris, who has carried out a great number of experiments in order to satisfy himself as to the most judicious way of effecting the required object. He proposes various chemical compounds for the purpose of dissolving or preventing the precipitation of the insoluble matter found to a greater or less extent in all water. The chief substances are, dry tannic, or gallic extract, as obtained from bark, gall-nuts, &c.; muriate and hydrate of soda, and subcarbonate of potass. The whole of the substances here enumerated, are used in a state of combination, the proportions being varied according to the nature of the water and the mode of its application. For boilers in connection with stationary engines, the patentee recommends the use of a compound of the following proportions:—12 ozs. of muriate, and 24 of hydrate of soda, 2 drachms of dry tannic or gallic extract, and half an ounce of subcarbonate of potass. This quantity he describes as being sufficient for a single horse-power for 336 hours in a stationary engine, where fresh water is used. If sea-water is supplied to the boilers, as for marine purposes, the muriate of soda is omitted, but greater proportions of the other materials are used. Thus for the same amount and duration mentioned above, the mixture would be 6 ozs. of hydrate of soda, and 5 drachms of tannic extract. If used in locomotive engines, supposing them to run 140 miles per day, the patentee recommends the proportions of the compound to be increased one-fifth. In stationary boilers it is to be added at once to the water in the boiler, once a day, or at slightly longer intervals.

GUM AND STARCH MANUFACTORY.—TO BE SOLD, the LEASE, MACHINERY, and STOCK IN TRADE of a GUM and STARCH MANUFACTURER, with a quantity of MANUFACTURED GUM, and the MACHINERY and UTENSILS for making the same. The manufactory has been established some years, and is situated in the west of England, within two miles of a wharf, from whence the goods may be shipped.—For further particulars, apply to Mr. Hazard, 19, Basinghall-street; or to Messrs. C. and H. Hyde, 33, Ely-place, London. 57

TO BE LET, the PARK-HILL MINES, DEAN FOREST, GLOUCESTERSHIRE—containing ONE MILLION TONS OF COAL, and ONE MILLION TONS of rich IRON ORE, which, being calcareous, smelts well with argillaceous ironstone, and may be delivered in large quantities to the Staffordshire, Shropshire, and Welsh iron-works, at a price far below the cost of local ironstones. The mines are drainable by level, and can be opened at a trifling expense; and, were blast-furnaces erected, their produce might be smelted on the spot into excellent iron.—Apply (post-paid) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire. 58

TO CAPITALISTS.—CARMARTHENSHIRE AND GLAMORGANSHIRE, SOUTH WALES.—The AGENT of an extensive estate, calls the attention of Ironmasters, Colliers, Manufacturers, Farmers, and Capitalists in general, to this announcement—he is prepared to ENTER into ARRANGEMENTS with respectable PARTIES for the LEASING, on long terms, of VARIOUS DESCRIPTIONS of PROPERTY, now the object of public attention—Anthracite and Bituminous Coal and Culm, Ironstone, Limestone, Marble, Flag, and other quarries—Fire Clay and Brick Earth, Land for erecting at, and near, a flourishing and fast-rising commercial town), seaport, and floating dock, manufactories, shipbuilding yards, wharfs, store and dwelling-houses; and, in the coal and iron districts, SITES for WORKS, joining a railroad and canal, leading, by their main trunks and branches, to three seaports—water-power is almost general.—SITUATIONS for RURAL and MARINE RESIDENCES in the most beautiful parts of the country, commanding views of Swansea and Carmarthen Bays, and the Black Mountain, with good roads, cheap markets, and daily communication with Bristol, Gloucester, and the metropolis. 59

The estate is situated in 24 parishes, offering, in every variety of soil and scenery, numerous objects of interest to the geologist, the sportsman, and the admirer of the picturesque. As an inducement to capitalists to embark in such agricultural improvements, as draining, planting, erections of proper homesteads, &c., which now so deservedly occupy public attention, LEASES of NINETY-NINE YEARS will be granted for these purposes. Cheap food, labour, fuel, and raw material of every description, will give the manufacturer an advantage over every other part of Great Britain; while the large and still increasing trade in coal affords an intercourse with all parts of the world, for importing the produce of their localities at cheap back freights, and for forwarding to their destination the manufactured articles. This more particularly applies to those undertakings where the consumption of coal forms a principal ingredient.

The South Wales Railway will pass through the town, touching the three seaports, and going over a large proportion of the estate on the sea-coast; while the contemplated inland railways will bring the collieries, ironstone, limestone, and stone quarries, within an easy distance of the agricultural counties of Hereford and Worcester, and the great chain of railway communication, connecting Birmingham, Liverpool, Manchester, and all the important manufacturing districts of England.

For further particulars apply to F. L. Brown, solicitor, Llanelly, John Williams, solicitor, 1, Verulam-buildings, Gray's Inn, London; Messrs. Brooks and Green, estate agents, 23, Old Bond-street, London; Mr. John Farram, estate agent, 29, Seel's-street, Liverpool; Alfred Henderson, solicitor, Albion Chambers, Bristol; Messrs. Horsfold and Harrison, solicitors, Leeds; and Mr. G. H. Belas, 66, Camden-street, Dublin.

LONDON AND NORTH-WESTERN RAILWAY.
STEAM-ENGINES FOR SALE, BY AUCTION.

On TUESDAY, the 15th of JUNE, at CAMDEN STATION, on the London and North-Western Railway, if not previously disposed of, TWO LOW-PRESSURE STATIONARY ENGINES, 60-horse power each—made by Maudslays. These engines are in good working order, and have duplicate pistons; also five fly and rope-wheels, and a travelling frame; two circular boilers, 20 ft. 6 in. long, 7 ft. 8 in. diameter, with two tubes in each, 2 ft. 8 in. diameter; two marine boilers, 18 ft. long, 7 ft. 6 in. wide, and 8 ft. 9 in. high; 100 feet of 9½-inch steam-pipe, safety-valves, dampers, frames, &c., complete.
Office, Euston Station, April 17, 1847. 60

BIRMINGHAM, WOLVERHAMPTON, AND DUDLEY RAILWAY.
SECOND CALL OF FIVE POUNDS PER SHARE—MAKING TEN POUNDS PAID.

The directors having passed a resolution, making a CALL upon the shareholders of FIVE POUNDS on each share held by them respectively—such call to be PAID on the 1st day of June, 1847; the shareholders are hereby required to pay such call on or before the day appointed, to one of the undermentioned bankers; and, in default thereof, they will be charged with interest, at the rate of 5 per cent. per annum, from that day until the said call be actually paid:—

The Birmingham Banking Company, } Birmingham.
Messrs. Attwoods, Spooner, and Co. }

OR AT THEIR LONDON AGENTS:
Messrs. Jones Loyd and Co., for the Birmingham Banking Company.
Messrs. Spooner, Attwood, and Co., for Messrs. Attwoods and Co.; and at
Messrs. Moss and Co., Liverpool, for the Birmingham Banking Company.

A circular will be sent to each shareholder, which must be deposited at the bankers when the call is paid. By order of the board of directors,
JOHN WILLIAM KIRSHAW, Secretary.
34, Bennett's-hill, Birmingham, April 26, 1847. 61

EAST LINCOLNSHIRE RAILWAY.—TO CONTRACTORS.—The directors are prepared TO LET the ERECTION and COMPLETION of the various STATIONS upon this railway.—The plans and specifications may be seen, and further particulars obtained, at Mr. Fowler's offices, 13, Abingdon-street, Westminster, on and after Monday, May 10th, and the directors will meet at their offices, 14, Moorgate-street, at Eleven o'clock, on Thursday, May 27, to receive the tenders and let the works.—The directors do not bind themselves to accept the lowest tender. G. H. PACKE, Chairman. 62

CALEDONIAN RAILWAY—LOANS ON DEBENTURES.—The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS of LOANS on DEBENTURES, in sums of not less than £500, for three or five years, bearing interest at the rate of 5 per cent. per annum, payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.

Tenders to be addressed to this office.—Parties may also communicate personally with Messrs. Foster and Braithwaite, 68, Old Broad-street, London.
By order of the directors, D. RANKINE, Treasurer. 63
Caledonian Railway Office, 122, Princes-street, Edinburgh, March 26, 1847.

CALEDONIAN RAILWAY.—At an Extraordinary General Meeting of shareholders of the Caledonian Railway Company, held in the Royal Hotel, Edinburgh, on Monday, the 26th of April, 1847, at One o'clock P.M.

WILLIAM LOCKHART, Esq., M.P., in the chair.

The advertisement calling the meeting, and the report of the directors to the shareholders having been read, it was resolved,

That the report now read be received and approved. 64

That this meeting sanctions and approves of the proposed agreement for a lease or guarantee of the Dundee and Perth Railway; and its branches by this company; and that the directors be empowered to execute the necessary agreements, and to affix the common seal of the company thereto.

That as one-half of the capital of £450,000, authorised to be raised by the "Caledonian Police, and Govan and Clydesdale Junction Railways Amalgamation Act, 1846" has been paid up, the directors be now authorised, in terms of the powers conferred by the 12th section of the said Act, to borrow in the manner, and by the ways and means in that behalf provided in the Caledonian Railway Act 1845, any sum or sums of money, not exceeding in all, the sum of £150,000, in addition to the sum of £700,000, authorised to be borrowed by the said last mentioned Act.

That this meeting sanctions and approves of the following bills now before Parliament, the drafts of which are now submitted—that is to say, of,

1. A Bill "To enable the Caledonian Railway Company to extend their station in Edinburgh, and to make a branch railway to Granton, and to the Edinburgh and Glasgow Railway."
2. A Bill "To enable the Caledonian Railway Company to make branch railways to Fauldhouse, and to Biggar, and Broughton."
3. A Bill "To enable the Caledonian Railway Company to extend their railway across the River Clyde at Glasgow, and to form a station in that city."
4. A Bill "To enable the Caledonian Railway Company to make a branch railway from the Glasgow, Garnkirk, and Coatbridge Railway to Glasgow, and to enlarge the station in that city."
5. A Bill "To enable the Caledonian Railway Company to make certain branch railways in the counties of Dumfries and Cumberland."
6. A Bill "To enable the Caledonian Railway Company to make an extension of the Motherwell branch of the Clydesdale Junction Railway to Auchenheath mineral fields, with branches therefrom."
7. A Bill "To enable the Caledonian Railway Company to make branches from the Clydesdale Junction Railway, to the Douglas and Leamshagow mineral fields, and to Strathaven."
8. A Bill entituled "A Bill to effectuate the sale of the Wishaw and Coltness Railway, to the Caledonian Railway Company."
9. A Bill entituled, "A Bill to enable the Caledonian Railway Company to take on lease a portion of the Glasgow, Dumfries, and Carlisle Railway."
10. A Bill entituled, "A bill to amalgamate the Glasgow, Paisley, and Greenock Railway, with the Caledonian Railway, and to authorise the raising of additional money, for the said last-mentioned company."
11. A Bill entituled, "A Bill to effectuate a lease of the Glasgow, Barrhead, and Neilston Direct Railway, and the Glasgow Southern Terminal Railway, to the Caledonian Railway Company, and to authorise the said company to raise money for these and other purposes." W. LOCKHART, Chairman.

The chairman having left the chair, the thanks of the meeting were given to him by acclamation.
122, Princes-street, Edinburgh, April 26, 1847.

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES,
RAILWAY CRANES, FIRE-ENGINES, GAS, &c.
PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION.

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c. 65

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,
Goswell Mews, Goswell-road, London.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from 8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 66
DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their
IMPROVED PATENT ELASTIC METALLIC PISTONS. 67

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.
2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.
3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

ALBERT ADVENTURE—NOW IN WORK, ON THE COST-BOOK PRINCIPLE.
In 1000 shares.—Deposit 5s. per share.

This LEAD and COPPER MINING ADVENTURE is situated in the parish of Gwinear, Cornwall, at about half a mile north-east of Alfred Consols, now a productive and very valuable mine. The extent of ground comprised in the Albert setts measures three-fourths of a mile along the course of the lodes, from the west to the east boundary, and one-third of a mile in breadth, north and south.

This ground has been long well reported of, as containing several lodes. The manager of the Great Wheal Alfred often expressed his opinion that extensive and profitable mining operations would be witnessed here. 68

Some years since a company was formed, and a mine was opened, under the name of "East Wheal Alfred;" an adit was brought into about the centre of the sett, and cross-cuts to considerable extent were driven; several promising lodes and branches were discovered; and it was unanimously agreed on, forthwith, to erect a steam-engine; the requisite shaft was sunk to about 18 fathoms; materials for building the engine-house were brought on the spot; shares were selling at advancing premiums; when, owing to certain disagreements amongst the parties concerned, further proceedings were abruptly stayed.

The operations of the said company, done at considerable expense, may be justly regarded as a valuable bonus to the new adventurers.

An efficient and encouraging inspection of the mine has been obtained; and, preparatory to ascertaining the most eligible position for the erection of an engine it is advised to drive a cross-cut, in order to the inspection of a lode in the south part of the sett, which was partially seen during the former working, and exhibited favourable indications near the surface.

An extract from the report of Capt. W. Paul, manager of the Tincroft and other mines in the neighbourhood, thus states, respecting the lode first cut by East Wheal Alfred adventurers, and thought to be a continuation of Great Alfred lode:—"This lode is two and a half feet wide; I consider it a kindly lode." And of the other lodes he thus reports:—"In the cross-cut north I discovered several branches, strongly mineralised. From one vein of lead I took some good stones, which, I think, contain silver. The north lode is 20 inches wide; contains mundic and lead, and is spotted with copper ore. I have a favourable opinion of this lode, as the branches and lodes to the south contain the same sort of mineral, and, from their inclination, will fall in with it in depth; indeed, the cross-cut, for several fathoms in length, is strongly mineralised, and the ground very cheap to excavate. Had there been no other lodes in the sett but those discovered, I think any company would be justified in erecting an engine of sufficient power to develope their resources."

Already the adit, the shafts, and cross-cuts, have been all cleared; a horse-whim is now erected on the main shaft; four men are set to drive south, to cut the extreme south lode, as advised by Capt. Paul; four others are opening on the lead branch, from which Capt. Paul selected the favourable specimens noticed in his report. Two men are costeaning at about 300 fathoms east of the present workings, where they have discovered some favourable strata, containing promising gossan and quartz.

A correct review of all the circumstances of this adventure, certainly justifies the necessary outlay to prove it thoroughly.

One plain and important fact should be specially regarded—it is this, that the north lodes incline south, and the south lodes north; and, from the west boundary, the direction of the lodes evidently indicates a junction in the eastern part of the sett. The presumption, then, obviously is, that, in depth and in extending east, a junction will be witnessed—the result of which probably will be, a valuable remuneration for the outlay made in the discovery.

£5000 may be required, for the necessary mining operations, effectually to prove the said lodes; but it is no improper suggestion, as matter of legitimate hope, that, ere the outlay of half the said capital be called for, the adventure may be marketable at a valuable premium.

This concern is divided into 1000 shares; the deposit, or first call, 5s. per share; the circumstances of progression will determine the time and amount of the next and future calls.—The plain and safe Cost-book System will be adopted, and the strictest regard to the appropriation of the capital to actual underground operations, will be economically adhered to by the managers.

Applications for shares are to be made to Mr. James Lane, sharebroker, 75, Old Broad-street, London: the Purser, Mr. F. Harvey, Hayle, Cornwall; or the London Secretary, Mr. W. Witcomb, Johnson's Chambers, 167, Fleet-street, London, of whom the prospectus may be obtained.—The prospectus can also be had at the office of the *Mining Journal*, 26, Fleet-street, London.

PERRANZABULOE SILVER-LEAD MINE COMPANY,
(ON THE COST-BOOK SYSTEM),
In 512 shares.

BANKERS—Sir J. W. Lubbock, Bart., and Co., 11, Mansion-house-street.
SECRETARY—Mr. W. H. Smith.
OFFICES—No. 10, WARNFORD-COURT, LONDON. 69

This mine is situate on the well-known mineral Penhale estate, in the parish of Perranzabuloe, in Cornwall; and, during its last working, has had the advantage of a beneficial outlay of capital, to the extent of at least 18,000*l.*, chiefly in underground works and operations. By means of this outlay, the permanent riches which this mine contains were fully established by the increase of its returns in 1821, from 7 tons per month to 50 tons at the time of its suspension; and which event was ascribable to no other cause than that of unfortunate disputes—branching out of other matters in litigation between the then proprietors of the mine—added to then low price of lead.

At the time the above mine ceased working, it was not contemplated that its suspension would have been of any duration; and, owing to this circumstance, the underground materials and works were left in their perfect state for future re-commencement of operations. To these benefits and advantages, which may be fairly estimated at a saving of 18,000*l.* in capital, for works in a complete state, and of a period of five years in time in performing those operations, the present proprietors have become the lawful successors.

In the formation of the present new company, however, the lessees propose to admit of the accession of co-adventurers on terms of equal participation with themselves in all the foregoing advantages, and to place the mine in the hands and under the management of the said proposed new company, on the most satisfactory and liberal terms.

For this purpose, therefore, it is proposed to divide the mine into 512 shares, and it is calculated that the capital required to set the mine into complete operation, will be about 5000*l.* The lessees consent to accept of 500*l.* for their interest in the same, there being upwards of that amount of property now actually on the mine. The lessees propose taking 100 shares, upon which they will pay equally with the other adventurers.

£2 10s. per share, on the transfer of shares, will be required; and calls will be made, not exceeding £1 10s. per share, at intervals of not less than three months (of which one month's notice will be given), for carrying out the future operations of the mine.

It is presumed, that as the higher levels are cleared of water, that pitches may be set and ore raised, which will materially assist the adventurers in their operations.

According to the reports of the mining agents, who superintended the operations of the mine to within a short period of its suspension, a more certain and profitable mining adventure could scarcely be selected, as the mine increased in richness in each succeeding deeper level. From those same levels, when again set to work, a profitable return may immediately take place, but in order to resume mining operations on the most scientific, and, at the same time, cheapest principles, the mine should at once be sunk 20 fms. deeper, and levels driven from that depth on the course of the lode, through the rich courses of ore leading down in the bottom of the 60 fm. level, when returns, to the extent of £1500, and upwards, per month, might be relied upon with safety, and at such moderate rate of working costs, as to ensure a clear profit of some £8000 to £9000 per annum for dividends to share proprietors.

It is confidently anticipated by experienced mining agents, well acquainted with this mine, that by sinking the mine 20 fms. deeper, and extending the levels through the rich ores leading down in the bottom of the 60 fm. level, permanent returns of 100 tons per month could be made with facility, exclusive of the probable returns, by extending the deep levels south, on the course of the lode, to communicate with the south and Vugga shafts.

The average produce of the ores is about 72½ per cent. for lead, and 24 ozs. of silver per ton, which, at the present price of pig-lead, would make at a public sale £15 per ton.

The new lease will be for 21 years, from the present period, at the very moderate royalty, or dues, of a 1-24th part of produce.

A committee of management will be chosen out of the adventurers at their first general meeting.

Application for shares to be made to the secretary, at the office of the company, 10, Warnford-court, Throgmorton-street, City.—The Prospectus may be had at the *Mining Journal*, 26, Fleet-street.

REPORT OF CAPTAIN WEBB.

According to your request, I beg to hand you all particulars I am in possession of, relative to Wheal Golden (now the Perranzabuloe Silver-Lead Mine)—viz.: The mine ceased to work about 20 years since—therefore, I have not had immediate engagements there. But for the last 10 years I have been connected with miners and others who have a perfect knowledge of it (many of whom I can place confidence in), and they state, that the north part of the mine is sunk to a 60 fm. level, which has yielded immense quantities of silver-lead ore. There is one particular run of ore in the bottom of the 60 fm. level, about 70 fms. long, a very promising lode, continuing northward in the present bottom ends, this being the most productive part.

The former party, who were rather embarrassed, made an attempt to sink immediately in the ore, by discontinuing the engine-shaft, and erecting flat-rods underground; but this operation was never carried into effect, and the price of lead being very low, a suspension took place, without the intention of finally abandoning the mine; as a proof of this, every material (to the extent of hundred of pounds worth) was let to remain in its place, such as 60 fms. of pit-work (I believe 14-inch lifts), and those newly erected flat-rods. Here very many hundreds of tons have been returned, and good ore ground still going down. More ancient workers have taken away much lead about, and a little below, the adit in this 200 fms., between the north and south mine; therefore, I consider the present engine-shaft in a good position for the extending of levels north and south.

With a moderate capital, and economy, I do not hesitate in giving my opinion that this mine will make an extensive, permanent, and profitable concern. It has been wondered why some spirited and respectable company has not taken it in hand ere this; but, until the last few years, lead was rather an unstable commodity, consequently lead mines were not anxiously sought after. J. WEBB.
Newlyn East, May 14, 1846.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 70

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A steamer from Southampton leaves the 1st and 20th of every month for Malta, where are steamers to Naples, Genoa, Civeta Vecchia, three times a month. 71

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Assurances for terms of years are granted on the lowest possible rates. 77

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age.	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 5 1	346 3 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

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